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BEFORE THE
SURFACE TRANSPORTATION BOARD

STB Docket No. 42104

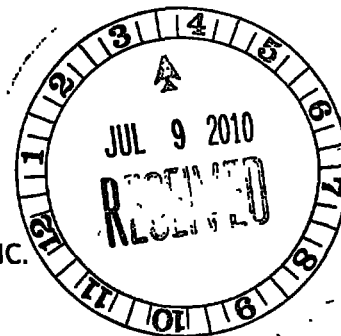
ENTERGY ARKANSAS, INC. AND ENTERGY SERVICES, INC.

v.

UNION PACIFIC RAILROAD COMPANY

AND

MISSOURI & NORTHERN ARKANSAS RAILROAD COMPANY, INC.



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REBUTTAL EVIDENCE AND ARGUMENT OF
ARKANSAS ELECTRIC COOPERATIVE CORPORATION

PUBLIC VERSION

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**REBUTTAL ARGUMENT OF
ARKANSAS ELECTRIC COOPERATIVE CORPORATION**

In accordance with the Board's Decision served June 26, 2009 in this Docket, Arkansas Electric Cooperative Corporation (AECC) joins Entergy Arkansas, Inc. and Entergy Services, Inc. (collectively Entergy) in asking the Board to prescribe, in accordance with 49 U.S.C. 10705, a through route to provide rail transportation of coal from the Powder River Basin (PRB) to the Independence Steam Electric Station (Independence) at Newark, AR, because Union Pacific Railroad (UP) is providing inadequate service and is foreclosing the possibility of a more efficient route for coal transportation from the PRB to Independence. 1/

I. INTRODUCTION

This is a peculiar case. The issue presented to the Board is whether a BNSF-MNA through route should be prescribed between the southern PRB and the Independence station, to provide an alternative to the current route via UP and (for a short distance) MNA. BNSF says

1/ In addition to the abbreviations in the foregoing paragraph, AECC uses the same conventional abbreviations for railroads, companies, and locations in this Rebuttal Argument as it used in its Opening Argument.

it's agreeable to participating in such a route, provided that the customer commits to providing enough business to justify necessary capital costs. BNSF Railway's Reply Argument at 3. MNA says it fears that if it agrees to participate in a through route that competes with the existing UP route, UP will terminate the lease on which MNA's existence depends. Reply of MNA at 6; Reply Verified Statement of John Giles (Giles Reply VS) at 24.

UP opposes the through route. This is hardly a surprise, as UP stands to lose its stranglehold on the Independence traffic if the Board prescribes a through route. But there is nothing in the statute that requires the Board to give any consideration to UP desire to protect its captive traffic.

In light of this situation, AECC urges the Board to adopt the following two propositions in its decision:

First and foremost, the Board must make clear that UP will not be permitted to use any provision of the MNA lease to retaliate against MNA for participating in the through route. As long as UP can threaten MNA with destruction, it would be unrealistic to expect MNA to participate in making the through route a success. The correspondence attached to the MNA Reply demonstrates MNA's unwillingness to risk UP's displeasure by entering into negotiations with Entergy and BNSF about a through route. See Verified Statement of Tommy Gibson (Gibson Reply VS), Exh. A.

Second, once the UP threat has been removed, the Board can rely on the professionals who operate and maintain BNSF and MNA to find reasonable solutions to whatever challenges the through route poses. The Board can also rely on Entergy and AECC, which have demonstrated their commitment to establishing a viable alternative to the UP

route, to work with the two railroads to make the route a success. Therefore, the Board need not concern itself with the nitty-gritty details of the through route. If the Board finds that the shorter BNSF-MNA routing meets the public interest criteria of 49 USC 10705 (as it surely does), the Board should prescribe the through route and leave it to the parties to make it work.

II. SUMMARY OF ARGUMENT

The key issue in this case is whether UP can prevent a through route prescribed by this Board from being successful. UP claims that it can do so, and that the Board is powerless to prevent it. AECC shows in this Argument that UP is wrong, and that the Board has the power to protect the through route that it prescribes.

In deciding whether to prescribe a through route, the Board will first consider whether doing so would serve the public interest. In this case, the proposed BNSF-MNA through route to Independence is necessary in the public interest because UP has abused its market power it obtains by using a circuitous and inefficient route between the PRB and Independence, and by failing to act reasonably to restore service to Independence in the face of three major service crises since UP established the present route. Although UP denies that it has abused its market power, the evidence submitted by AECC establishes that it has done so.

UP contends that MNA is not capable of handling unit coal trains between Lamar and Independence as part of a through route. AECC's evidence establishes that MNA's lines have carried this traffic before, and that it is capable of carrying this traffic in the future. Some infrastructure investments will be required to make the through route work, but they are modest and commensurate with the traffic involved.

III. DISCUSSION

A. UP Is Wrong In Claiming That The Board Is Powerless To Prevent UP From Using Contract Provisions To Destroy A Through Route Ordered By The Board

It is indisputable that the Board has the power under 49 USC 10705 to prescribe a through route, and no party in this proceeding expressly contends otherwise. But UP claims that provisions of its contract with MNA give it the power to trump Section 10705 and to prevent a Board-prescribed through route from becoming effective. The Board, UP argues, has already admitted that it is powerless to do anything to stop UP from doing so. See UP Opening Argument at 14-18. UP is wrong.

UP claims that the Board's June 26, 2009 Decision in this case, which identified Section 10705 as the appropriate remedy for the problem that Entergy and AECC had brought to the Board for resolution, "made clear that Entergy [and AECC] could not use section 10705 to excise the interchange and contingent rent provisions from the lease; any relief that might be available under section 10705 'would be narrowly tailored; it would simply require MNA to interchange with a party other than UP.' " Id. at 14. The Board said no such thing.

In the very first paragraph of its June 26 Decision, the Board acknowledged that Entergy and AECC are challenging the very provisions of the UP-MNA lease (the "interchange and contingent rent provisions") that UP claims the Board is powerless to address. Entergy Arkansas, Inc. v. Union Pacific RR, STB Docket No. 42104 (served June 26, 2009) (June 26 Decision), at 1. The Board said that Entergy and AECC:

challenge the enforceability of the Interchange commitment provisions of a lease between [UP] and [MNA] involving approximately 300 miles of track in Arkansas, Kansas and Missouri. Entergy and AECC allege that the

interchange commitment unlawfully restricts MNA from interchanging the plant's coal traffic with other carriers, including [BNSF].

Id. The Board summarized the relief sought by Entergy as follows:

Primarily, Entergy asks us (1) to leave the lease in place, but preclude UP from enforcing the rental payment provision; (2) to prevent UP from exercising any right to provide exclusive service to Entergy without its consent; and (3) to preclude UP from exercising any right to terminate the lease. See Entergy Opening Evidence and Argument (Entergy Open.) at 60-61. Alternatively, if UP were allowed to terminate the lease, Entergy asks that we somehow give shippers generating a majority of the carloads on the line (here Entergy) a right to veto any new lease if those shippers object to the terms of the lease. Id. at 62-63. Finally, Entergy seeks clarification that, if the lease is permitted to remain in place as is, and if Entergy obtains a new through rate involving BNSF (or bottleneck rate) pursuant to section 10705, MNA's rental payment to UP would play no role in a challenge to the new through route under the stand-alone cost (SAC) test.

Id. at 6.

Entergy originally sought this relief under Section 10702, which deals with "unreasonable practices" by railroads. Contrary to UP's claim that the Board "rejected Entergy's unreasonable practice challenge" (UP Reply Argument at 14), the Board actually ruled, in this "case of first impression" (June 29 Decision at 6), that:

[T]he general nature of section 10702 makes it an inappropriate provision under which to establish the impropriety of an interchange commitment when there is a more specific provision that governs the behavior at issue and its effects.

Id. at 1-2. The Board went on to explain that:

There is, however, a straightforward path whereby Entergy could seek to establish that it is entitled to the type of relief it desires – a Board order under 49 U.S.C. 10705 directing MNA to interchange with a long-haul carrier other than UP.

Id. at 2. This section is “the appropriate provision to invoke in this case”, because it “provides a means to directly address and remedy the precise problem about which Entergy complains.”

Id.

The Board therefore allowed Entergy to “amend its complaint to pursue relief in this docket under Section 10705.” Id. 11. The Board underscored the effect of its ruling by providing that no new filing fee would be required to seek relief under Section 10705, and by providing that the new complaint should be filed in the same docket as the initial complaint.

Id. at 2 n. 1.

Thus, it is absurd to argue, as UP does, that “the Board made clear that Entergy could not use section 10705 to excise the interchange and contingent rent provisions from the lease” (UP Reply Argument at 14). On the contrary, the Board expressly ruled that Section 10705 is the “most appropriate” statutory provision “to directly address and remedy” the interchange commitment provisions of the UP-MNA lease that Entergy and AECC are challenging.

Furthermore, if the Board were powerless to deal with “the interchange and contingent rent provisions” of the UP-MNA lease, those contractual provisions would destroy any through route the Board prescribed. The penalty rent provisions of the lease were not intended to compensate UP for MNA’s use of tracks owned by UP; the penalty rent was expressly intended by UP to prevent MNA from interchanging more than a minimal percentage of traffic with any railroads other than UP. UP Reply Argument at 8. If the Board were powerless to address the penalty rent provision, then prescribing a BNSF-MNA through route would be a meaningless exercise, because MNA would be effectively prevented from

participating in the route. Similarly, the through route could be destroyed if the Board could not address the other provisions of the UP-MNA lease that allow UP to serve Independence itself to the exclusion of MNA, or to terminate the lease to MNA entirely. 2/

A Board order preventing UP from destroying a Board-prescribed through route would not authorize “free use” of UP property by MNA, as UP claims. UP Reply Argument at 15. The “property” involved is the rail lines leased to and operated by MNA. Although the underlying title to the lines belongs to UP, MNA owns the leasehold estate in these lines. The lease – not any Board order – gives MNA the right to use those lines “for free” (“UP never expected to collect rent from M&NA” – UP Reply Argument at 8). The lease does contain provisions intended to prevent MNA from using its (leased) property to compete with UP, and it

2/ The most direct way for the Board to deal with these contractual provisions is to provide in the through-route order that such provisions may not be enforced or exercised by UP against MNA in connection with the through route. AECC urges the Board so to provide in prescribing the BNSF-MNA through route. See AECC Opening Argument at 8-11. AECC suggested as an alternative that the Board could prescribe conditional terminal trackage rights over UP for the benefit of another carrier, presumably BNSF, such rights to go into effect if, but only if, UP prevented MNA from participating in the through route. The purpose of such an alternative would be to discourage UP from exercising contract provisions to destroy the through route. See AECC Joinder In And Supplement To Entergy’s Amended Complaint, at 5. This alternative is discussed at greater length in AECC’s Opening Argument at 8-12, and in the Verified Statement of Michael A. Nelson (Nelson VS) at 10-13. In its Reply, UP argues that AECC has not satisfied the requirements of Section 11102 (UP Reply Argument at 17), but it makes no attempt to deny that, if allowed to do so, it could and would destroy the BNSF-MNA through route. Just to be perfectly clear: AECC has not made an application under Section 11102. AECC has joined Entergy in making an application under Section 10705. For a Board order establishing a through route under that section to be successful, UP must be prevented from using contractual provisions to destroy that route. AECC has proposed trackage rights to BNSF as one way to prevent UP from destroying the through route. The method used, however, is not as important as accomplishing the goal: To prevent UP from destroying the through route, and MNA along with it.

is those provisions that the Board may quite properly prevent UP from exercising in a way that would destroy a through route prescribed by the Board.

Thus, the Board should reject UP's claim that the Board is powerless to prescribe a through route to Independence, or powerless to prevent UP from destroying such a route.

B. The Proposed BNSF-MNA Through Route Satisfies The Requirements Of Section 10705

The statute provides that the Board "shall when it considers it desirable in the public interest, prescribe through routes . . . and the conditions under which those routes must be operated" 49 USC 10705 (a) (1). Where the proposed through route would short haul one of the participating railroads, additional criteria under Section 10705 (a) (2) must be met, but neither MNA nor BNSF claims it would be short-hauled by the through route proposed in this case. AECC discussed the applicable legal standards under Section 10705, and in particular the standards that the Board identified in its June 26, 2009 Decision in this case, in its Opening Argument at 3-6.

AECC's Opening Evidence and Argument showed that UP has abused its market power by establishing a circuitous route from the PRB to Independence and by providing inadequate service on several extended occasions; AECC further showed that the proposed BNSF-MNA through route would be shorter and more efficient than the UP route. AECC Opening Argument at 6-7; Verified Statement of Michael A. Nelson (Nelson VS) at 4-9.

In response, UP argues that the circuitous route it established between the PRB and ISES was actually more efficient than the shorter route over the lines that now are part of

MNA, and is more efficient than the proposed BNSF-MNA through route would be. UP Reply Argument at 48-50, 57-60.

AECC's witness Michael Nelson, a transportation systems analyst with 30 years of experience in railroad competition and coal transportation, shows in his Rebuttal Verified Statement that UP's efficiency claims don't hold water. ^{3/} For example, UP argues that the "round trip" distance on its route is only slightly more than the "round trip" distance on the through route, so the two routes are equally efficient. UP's "round trip" comparison uses a shorter empty return movement to offset UP's longer loaded movement. Mr. Nelson shows that this comparison is misleading because the loaded portion of the movement generates most of the ton miles and costs, and the loaded portion of UP's route to Independence is significantly longer than the BNSF-MNA through route.

Mr. Nelson also points out that when UP adopted its present route to Independence, it had to grant Entergy a rate reduction because the circuitry of the new route increased rail car expenses for Entergy, as UP's own former Senior Business Director – Energy admitted. Verified Statement of F. M. "Rick" Gough (Gough Reply VS) at 6. If the longer route were really more efficient, it would have reduced Entergy rail car expenses, not increased them.

^{3/} Information in the verified statements that was identified by the party producing it as classified under the Protective Order is redacted from the "Public Versions" of the verified statements. In the HIGHLY CONFIDENTIAL versions of the verified statements, such classified information is indicated with single curved brackets ("{ }") in accordance with UP's practice in its Reply filing (because virtually all the classified material referred to by AECC's witnesses came from UP).

Mr. Nelson also refutes UP's argument that its poor service to Independence over several extended periods has nothing to do with abuse of its market power. UP Reply Argument at 34-35. As Mr. Nelson shows, although UP's market power did not cause the service disruptions, the absence of any alternative service to Independence reduced UP's incentive to restore service quickly.

AECC's witnesses Jerry W. Heavin and David W. Brookings also refute UP's claims about the relative efficiency of the UP route compared to the through route. These railroad engineering consultants have a combined 80 years of experience in the railroad industry. Messrs. Heavin and Brookings refute UP's claims that shortcomings of the MNA make it less desirable than the UP route. There are no serious shortcomings to the MNA route compared to the UP route, and it has several important advantages over the UP route in addition to its shorter mileage.

In short, there is no real basis for dispute that the proposed BNSF-MNA through route would be more efficient than the circuitous UP route. The current route is advantageous to UP, which is able to concentrate its traffic on particular lines, but it is not advantageous to Entergy/AECC, UP's customer at Independence. UP is able to advance its self-interest at the expense of its customer only because it is able to exploit its market power. Nor is there any real basis for dispute that UP's service to Independence has often been inadequate, and that UP's market power has eliminated the kinds of incentives that would encourage a carrier to respond more quickly to service challenges.

Thus, the overwhelming weight of the evidence shows that the prescription of the BNSF-MNA through route would be "desirable in the public interest" under 49 USC 10705

(a) (1). This is precisely the kind of situation that Section 10705 is intended to address. See June 26 Decision at 7 (“The Board may exercise its authority under section 10705 to order a carrier to open another route if a party demonstrates that the bottleneck railroad has exploited its market power by (1) providing inadequate service over its lines or (2) foreclosing more efficient service over another carrier’s line.”). ^{4/}

C. The Proposed BNSF-MNA Through Route Is Feasible

In its June 26 Decision, the Board said that, in deciding an application to prescribe a through route to Independence, one of the factors it would consider was whether the proposed route is “feasible”. June 26 Decision at 7. The Board observed that before 1983 “Entergy received its coal via a joint movement of Missouri Pacific (over lines now leased to MNA) and BNSF, suggesting that the alternative routing Entergy seeks may be feasible . . .” Id.

UP argues that MNA is a low density line that is inherently unsuited to carry unit coal trains, that the physical condition of the MNA is inadequate to handle the loads involved, and that constructing additional facilities to handle the Independence traffic would be prohibitively expensive.

UP’s discussion fails to focus adequately on the volume of traffic to Independence that would be available for movement over the new through route. As Entergy explained in its opening, the existing contract with UP commits most of the traffic to UP, so only a limited amount of traffic could be routed via BNSF-MNA until the UP contract expires, almost

^{4/} UP doesn’t look like the typical “bottleneck railroad”; MNA does. But UP’s control over MNA through the contract provisions that are at issue in this case effectively gives UP control over the bottleneck.

five years from now, on June 30, 2015. If the through route is established, then as mid-2015 approaches, Entergy/AECC will undoubtedly be engaged in detailed discussions with MNA and BNSF regarding how much traffic those roads will carry to Independence, and on what terms. The need for additional facilities to handle the increased volume of traffic will be part of those discussions, but that need not concern the Board now. The only issue now is whether it is feasible to route over the new through route some or all of the Independence traffic that is not committed to UP.

The available traffic is described in terms of tons per year in Entergy's Opening Argument and Evidence. See Verified Statement of Ryan Trushenski at 2. More useful for purposes of the present discussion are the traffic volumes in terms of number of trains per day or trains per month. This information is handily available in the MNA Reply filing, Gibson Reply VS, Exhibit A, which shows that the available traffic to Independence represents:

From January 2011 through June 2012 (1 ½ years)	10 loaded trains per month
From July 2012 through June 2015 (3 years)	2-3 loaded trains per month <u>5/</u>

Thus, without attempting to prejudge the outcome of discussions between Entergy/AECC and MNA and BNSF regarding traffic volumes on the through route, discussions which cannot occur until after the Board prescribes the through route (for reasons discussed in Part I, above), we can certainly say that the volume of traffic that the new route must accommodate will be no

5/ AECC's witnesses have "rounded up" and use 11 loaded trains per month and 3 trains per month, respectively, in their analyses.

more than one loaded train every third day, and for most of the period under discussion no more than one loaded train every 12th day.

Mssrs. Heavin and Brookings refute the UP's claim that MNA lacks the physical capacity to carry unit coal train traffic between Lamar and Independence. MNA already carries unit coal trains as well as unit grain trains on several parts of its line, and the railroad overall meets the requirements to handle 286,000-pound cars. Mssrs. Heavin and Brookings inspected the MNA line and they describe the condition of its rail, ties, ballast, bridges, and tunnels as being fully adequate for the kind of operation that the through route would entail. This is not surprising, because what is now MNA was previously part of the UP system and was used for just this kind of traffic until UP made the decision that the circuitous Oklahoma routing was more beneficial to its self-interest. MNA is a well-run and well-maintained railroad. Increasing its traffic by routing several unit coal trains per month over its line between Lamar and Independence will, of course, increase maintenance costs (while generating the revenues to pay those costs), but even if all Independence coal traffic is eventually routed over the BNSF-MNA through route, MNA will remain a low density line.

UP challenges the feasibility of the proposed through route on the ground M&NA would have to spend "millions of dollars" to construct a new interchange with BNSF, as well as other facilities to accommodate the movement of loaded unit trains of coal moving to the Independence plant. UP Reply Argument at 22-23. Mssrs. Heavin and Brookings, and Mr. Nelson, show that UP exaggerates the amount of new facilities that would be required for the proposed through route. Although a connection between MNA and BNSF will have to be established at Lamar, MO, this would not have to be an extensive or expensive facility, given

the limited volume of traffic to be interchanged there. If MNA decides that some new construction on the line would enhance the efficiency of the operation, such as for sidings and the like, the amount would be modest and commensurate with the traffic that the through route would carry. If the route is successful, and the opportunity is presented to route a greater volume of traffic over the route in later years, MNA and BNSF will be able to make a judgment whether or not to invest in additional facilities.

IV. CONCLUSION

The evidence establishes that it is “desirable in the public interest” for the Board to prescribe a through route between the Powder River Basin and the Independence Steam Electric Station, via BNSF Railway and Missouri & Northern Arkansas Railroad, with a connection at Lamar, MO.

For that through route to accomplish its public interest purpose, the Board must preclude Union Pacific Railroad from exercising its contractual powers against MNA that would in any way interfere with the through route.

AECC respectfully requests that the Board so order.

Respectfully submitted,



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Dated: July 9, 2010

REBUTTAL VERIFIED STATEMENT

OF

MICHAEL A. NELSON

**REBUTTAL
VERIFIED STATEMENT
OF
MICHAEL A. NELSON**

My name is Michael A. Nelson. I am a transportation systems analyst with 30 years of experience in railroad competition and coal transportation. A summary of my experience is provided in my opening verified statement in this proceeding, which was contained in the Opening Evidence and Argument submitted by Arkansas Electric Cooperative Corporation (AECC).

On behalf of AECC, I have been asked to comment on the reply evidence submitted by Union Pacific Railroad (UP), BNSF Railway (BNSF) and the Missouri & Northern Arkansas Railroad (MNA) regarding the request by AECC and Entergy for the Board to establish a BNSF-MNA through route to serve the Independence Steam Electric Station (ISES) at Newark, AR.

The railroad replies underscore the existence and extent of UP's market power over the ISES movement, and the rationale for the Board to provide relief under Section 10705 from the adverse effects stemming from the exercise of that of that market power. MNA, which would be a beneficiary of the proposed through route, may be the only railroad in history ever to oppose being given an opportunity to handle unit coal trains. MNA's trembling opposition to Entergy/AECC's request is compelling evidence of the extent of UP's market power, the role of the MNA lease terms in securing UP's market power, and UP's willingness to use its contractual arrangements (i.e., its ability to make MNA disappear) to interfere with relief the Board may order in this proceeding.

UP generates a huge amount of hyperbole in its reply that purports to undermine, but ultimately reinforces, the foundation for the Board to grant the requested relief. Specific examples of this include the following:

1. Increase in volume – UP portrays the requested relief as producing dramatic percentage increases in MGT on MNA. However, those percentages are large because the line presently carries very low volumes of traffic. In reality the requested relief would add, at the most, on the order of one loaded train/day on the lightest density portion of MNA. Indeed, the requested relief would **reduce** tonnage on the busiest portion of MNA. The total number of loaded and empty ISES train movements MNA would perform if the entire volume of ISES traffic were eventually shifted to the BNSF-MNA through route is about 27 percent less than the number performed by MP on this line 20+ years ago. All else equal, this indicates that the operational feasibility of the requested relief is not subject to meaningful dispute.
2. Interchange facilities – UP attempts to create the impression that the potential interchange infrastructure at Lamar outlined by Entergy witness Crouch will be considerably more expensive than witness Crouch estimated. I understand that Entergy will address in its rebuttal the defects in UP's specific claims. Moreover, UP notably overlooks a number of strategies that would be available to ensure that the costs of upgrading the interchange are kept at reasonable levels. These include making use of the existing Lamar siding as needed to chamber trains, relocating the existing Lamar siding, or relocating the crew change relative to the physical connection. There is no reason for the Board to expect that BNSF and MNA, the railroads involved in the through route, would elect to pursue the unnecessarily costly approach described by UP.
3. Staging facilities – UP claims that substantial new staging facilities would be needed at Lamar (or Aurora), as well as at the plant. However, UP's claims overlook completely the ability of MNA to manage the staging of trains in both directions using its existing inventory of sidings. MNA can't manage the staging of trains for UP in this way, but it has more than enough sidings between Lamar and the plant to supply the buffer capacity UP claims is needed. Especially in light of the reduced number of train movements MNA must execute (relative to MP in the 1980's) to serve ISES, UP's assertion that more staging infrastructure is required is implausible. If anything, UP's evidence demonstrates that the through route would yield a net reduction of staging facilities, since it would obviate the need for staging trackage UP currently requires at Newport and Kansas City.
4. Deferred maintenance – UP asserts that MNA has substantial deferred maintenance in track components that are important to the movement of heavy haul traffic, including rails and ties. UP's claims are without merit because they fail to take into account the upgrades in these components that UP implemented prior to the creation of MNA. However, UP's claims regarding the extraordinary infrastructure burdens associated with heavy haul traffic do underscore the importance of using the shortest route (in this case, the requested BNSF-MNA through route) for such traffic.
5. Floods - UP introduces a novel claim that the Board should refuse to approve the requested through route because MNA is purportedly susceptible to flooding. This claim is inconsistent with UP's own actions, such as [REDACTED], and relying on MNA to return the ISES empties. UP apparently wants the Board to forget the fact that during the past 18 years the major service inadequacies experienced by ISES have originated from events and conditions on the UP

network, and have had nothing to do with flooding or any other issues related to the dependability of MNA's service.¹

Ultimately, UP does not and cannot deny the undeniable – that UP holds market power over the ISES movement, that it diverted the ISES movement to a route far longer than the original MP route (and considerably longer than the BNSF-MNA route), and that ISES has repeatedly experienced inadequate service since UP established its current route. These conditions provide redundant bases for the relief envisioned under Section 10705.

SUMMARY OF ISSUES COVERED IN THIS STATEMENT

This verified statement reviews the public interest rationale for the relief available pursuant to Section 10705, and demonstrates how the various railroad attempts to downplay or sidestep its applicability lack validity. There is no doubt that ISES traffic qualifies for Board consideration and remedial action under Section 10705.

This statement then examines UP's claims regarding the train movement requirements faced by MNA, and the interchange, staging and siding infrastructure needed to ensure the operational feasibility of the requested through route. Even a cursory review of the facts shows that UP's claims regarding added costs associated with needed infrastructure are greatly exaggerated.

This statement then assesses UP's various claims regarding the relative efficiency of the current UP route to ISES via Oklahoma vs. the proposed BNSF-MNA route to the plant. It concludes that UP's efficiency analyses rely on unrealistic assumptions to create the illusion of advantages for the circuitous UP route. In fact, UP's data, and one of its witnesses, ultimately

¹ MNA Reply at 20.

reaffirm the Board's past recognition that, all else equal, minimizing the length of heavy haul movements is an overriding consideration.

This statement then examines UP's claim that the through route is not warranted because the service provided by UP is "better" than that provided by BNSF. It finds that UP's comparisons are faulty because they ignore the role competition can play in establishing the level of service experienced by a shipper. The availability of the less-circuitous BNSF-MNA through route provides opportunities for better service than has been provided under UP's control of this traffic, and UP fails to prove otherwise. UP may wish that the Board would look at service issues in a way that indemnifies its market power, but such a view would undermine the Board's well-defined and important public interest mandate to consider and address the connection between the two.

Finally, this statement reviews the rationale for relying primarily on loaded route mileage as an indicator of heavy-haul route efficiency in this proceeding, and addresses an assortment of tangential issues raised in the railroad filings, none of which alter the merits of Entergy/AECC's request for relief pursuant to Section 10705.

Note Regarding Role of UP

Most of the issues that are addressed in this statement respond to arguments raised by UP and its witnesses that are not also raised by MNA or BNSF. From a public interest perspective, this raises general concerns regarding the role of UP and weight that should be attached to such portions of UP's reply evidence.

One the one hand, if MNA and BNSF do not see a problem with some aspect of Entergy/AECC's request – such as the effect of adding the ISES loaded movement to MNA's

existing traffic, or the suitability of 112-pound rail for PRB unit coal train movements - it is not clear that the Board should give any weight to claims by UP that the given aspect entails major problems. MNA and BNSF have the ability and have had the opportunity to respond to any aspect of Entergy/AECC's request that they considered to be problematic in any way. If UP is the only railroad talking about a given issue, it would be reasonable for the Board to conclude that the issue is not overly significant, and that UP's assertions are colored by UP's plain self-interest in preventing the implementation of the requested relief.

On the other hand, if UP is somehow "speaking for" MNA (or BNSF), this would itself underscore the need for the Board to craft carefully the competitive access relief it may (and should) find warranted by the facts of this case.² The competitive access remedies, as their name implies, assume that the carrier receiving access will act as a competitor. MNA, as a potential competitor of UP for the ISES movement, acting rationally in its own interest, would not delegate to an incumbent monopolist authority to explain to the governing regulatory agency the reasons why the potential competitor should not be allowed to compete. For MNA to fulfill the role envisioned in the competitive access remedies, the Board must take steps to ensure that UP is not able to "speak for" MNA in any aspect of MNA's position as a through-route partner of BNSF for the ISES movement.

As described previously by AECC, such steps include severing the applicability to the ISES movement of the MNA penalty rent provisions, and ensuring that UP understands the Board will amend any relief it may grant in this proceeding to ensure its continued effectiveness in the event UP takes responsive action that would have the effect of undermining the through

² See, for example, MNA Reply at 20, where "M&NA adopts UP's position with regard to the efficiencies of the alternate routes."

route. The railroads have not argued, nor could they credibly argue, that a through route prescribed under Section 10705 could perform effectively if the decisions, pricing and even future existence of a through route carrier were left in the hands of the carrier holding the market power the through route was intended to address – in this case, UP.

PUBLIC INTEREST RATIONALE FOR RELIEF

The relief contemplated under Section 10705 responds to specific harms that may reasonably be anticipated to arise in the absence of effective competition. While service levels even in competitive marketplaces can vary, the absence of effective competition narrows dramatically the range of options available to a customer when poor service occurs, and largely removes the threat that poor service will cause a supplier to lose volume. If a supplier in such circumstances provides service so poor that resource allocation is distorted, remedial action is consistent with the public interest.

In the context of this proceeding, poor rail service has caused Entergy/AECC to experience substantial near-term costs associated primarily with the unanticipated need to procure substitute fuel and power, and longer-term costs associated primarily with the revealed need to build and maintain increased coal inventory and railcar fleet levels.³ It is reasonable to

³ UP complains that the discussion of stockpile and fleet size impacts presented in my opening verified statement does not have supporting workpapers. See UP Reply Argument at page 48, footnote 40. However, as indicated in my opening statement, the underlying information was supplied by AECC. It did not entail any computations on my part that were not shown in my statement. Indeed, my statement did not even monetize the fleet size impact. Under these circumstances, there were no workpapers to provide.

The adjustment of stockpile size in response to transportation variances is a textbook component of logistics management – it would be unusual if such an impact had not occurred as a result of the sequence of events at ISES. The information regarding the magnitude of the impact provided to me by AECC did not appear unreasonable to me, and apparently does not appear unreasonable to UP, which has offered no substantive criticism of it. Any impact of this type stemming from remediable service problems represents an economic inefficiency that is contrary to the public interest.

anticipate that such harms would be reduced or eliminated by the introduction through Section 10705 of a competitive alternative route.

Similarly, it is recognized generally that an absence of effective competition may cause a firm to under-invest in capital facilities. In the specific case of railroads, this tendency is exacerbated by the “long-haul preference” of a railroad to handle over its own lines the longest proportion of a movement for which it is able to provide service. In the absence of effective competition, and particularly in the presence of the “bottleneck rule”, a carrier’s reliance on an inefficient, circuitous route generally does not create a threat that the traffic will be lost to another carrier operating a more efficient route.⁴ Again, it is reasonable to anticipate that the inefficient resource consumption associated with the circuitous route could be reduced or eliminated by the introduction through Section 10705 of a competitive alternative route.

UP argues that the major episodes of service problems cited by Entergy/AECC⁵ resulted from circumstances that had nothing to do with competitive conditions at the Independence plant, and that affected many shippers across UP’s network, not just Entergy.⁶ UP is able to cite Entergy and AECC witnesses (including me) for these propositions because they are not disputed. Neither the language of the statute nor its underlying economic rationale requires that the service problems somehow originate from the market power held by the railroad over a specific facility or movement. No one has alleged that the Midwest floods, UP’s merger

⁴ UP argues that it had no incentive to switch to a less efficient route. UP Reply Argument at 48. UP apparently either does not grasp or does not wish to acknowledge that the decisions of a firm with market power may differ from the decisions of a firm facing competitive pressure.

⁵ These include 1993-1994, when UP experienced problems following record Midwest flooding; 1997-1998, when UP experienced problems following the UP/SP merger; and 2005-2006, when UP experienced problems following the impairment of the PRB Joint Line.

⁶ UP Reply Argument at 34-35.

integration problems, or the Joint Line throughput problems were caused by UP's market power over the ISES coal movement, or that service problems were not experienced by other shippers.

Rather, the issue here is the conduct of UP in response to service issues that arise, and the pattern of severe, protracted service disruptions that have occurred at the UP-captive ISES facility relative to competitively-served shippers. If it were really the case that all powerplants, despite maintaining appropriate stockpiles, ran out of coal and incurred large adverse economic impacts comparable to those of ISES each time there has been a service disruption, UP had an unfettered opportunity to document that in its reply. UP has not done so, and there is no basis upon which anyone could believe that captive and competitively-served coal shippers faced the same options for responding to service problems.

In the Joint Line throughput problems of 2005-2006, for example, UP operated under a lengthy period of force majeure and an embargo on new business, while BNSF was able to take advantage of its multiple routes out of the PRB to lift its force majeure quickly (by comparison) and move coal for the customers it could serve. Coal shippers with access to BNSF had options that captive UP customers did not. Indeed, while BNSF and UP combined were able to deliver most of the PRB tonnage committed in the total marketplace during this time, ISES, a captive UP customer, was subjected to a protracted service and operational disruption (the third such event to occur since 1993). In this and in the previous disruptions, if ISES had available the requested through route it would have had options for recovering from the service disruptions that in practice it could not utilize due to the market power exerted by UP. The inadequacy of the service the plant actually received forms the "disregard for the shipper's needs" referenced in the Midtec decision. That decision supports fully the proposition that competitive access is an

appropriate remedy where, as here, a shipper receives inadequate service “due to the intransigence of a monopoly carrier”.

Ultimately, UP has provided no basis upon which the Board could or should discount the importance of competitive access as a remedy for inadequate service, as contemplated in the statute. Especially in light of the demonstrated ability of the large railroads to create or exacerbate significant service problems through questionable management decisions – insufficient crew hiring, inadequate merger planning, poor maintenance practices, etc. – the Board should not adopt the lax standard advocated by UP, which basically would require the shipper to prove somehow that its plant was “singled out” for different treatment and otherwise leave the carrier free of responsibility for inadequate service it may provide. The harms at issue here arise from tangible distortions of resource allocation that occur as a result of the foreseeable conduct of a firm (in this case, UP) with market power, and not from any type of special conspiracy or clandestine activity.

It is also important to note that the harms that result from the absence of effective competition cannot be excused by the stated consent of a captive shipper, or by any of the “he said, she said” arguments advanced by UP.⁷ As the carrier controlling service to ISES, UP cannot credibly claim that it did not know its service to the plant was so inadequate as to endanger continued normal operations, or that it would have provided more cooperation on interline service if Entergy had only asked using the right “code” or “password”. If UP had grasped or respected the significance of Section 10705, it would have recognized that it has an obligation to provide service that is not unreasonably different from the service a competitively-served shipper would experience, and would have initiated whatever actions were needed to ensure the

⁷ UP Reply Argument at 34-48.

provision of such service, even if it involved service via through routes. By the same token, UP cannot rely on the proposition that the shipper gave informed consent to any aspect of the situations that contributed to the eventual burn restrictions and associated economic impacts on Entergy, AECC, and their customers. Particularly in light of the obvious possibility that UP's market power could be used to leverage a statement of consent on any specific issue, such a statement does not remedy or prevent the resource misallocation that is the central focus of Section 10705.⁸

MGT LEVELS AND TRAIN MOVEMENTS

UP reply witness Hughes portrays the requested relief as producing dramatic percentage increases in MGT.⁹ These increases provide a backdrop for UP's assertions regarding the additional infrastructure that would be needed for MNA to be able to handle the loaded ISES movement. However, even a cursory inspection reveals that those large percentages result from the fact that the portion of the MNA main line examined by Mr. Hughes handles comparatively little MGT other than that associated with the ISES movement. The large percentages do not alter the fact that, at [REDACTED] million tons per year, the through route would add only [REDACTED] loaded trains per month (or one loaded train every [REDACTED] days) to MNA's current operations, and at

⁸ As discussed further below, this applies also to Entergy's consent to UP's use of the Oklahoma route for the ISES movement.

⁹ Witness Hughes develops percentage increases for both the [REDACTED] million ton per year traffic volume that would be available for diversion to the through route for the 18 months from [REDACTED] and the 6.5 million ton per year amount (the entire ISES volume) that could be available for diversion to the new route starting in [REDACTED]. From [REDACTED], only [REDACTED] million tons per year would be available for diversion. The observations presented in this section apply to all of the volume scenarios up to and including the 6.5 million tons per year volume. As a result, the Board can be confident that the "expansion path" faced by BNSF and MNA will face no insurmountable infrastructure limitations as greater volumes become available to move in the future.

6.5 million tons per year – the entire volume of ISES traffic - the through route would add only about one loaded train per day to MNA's current operations.¹⁰

Further investigation reveals that the loaded ISES movement would be added on the lightest density portion of MNA. Specifically, in Table 1 of his testimony, Mr. Hughes shows that the movement of empty ISES trainsets accounts for approximately 2.3 MGT annually,¹¹ while the entire loaded ISES movement (at the 6.5 mtpy level, starting no earlier than [REDACTED] [REDACTED]) would add approximately 8.8 MGT annually.¹² Based on this information, a more complete summary of MNA traffic densities by line segment¹³ is as follows:

¹⁰ From [REDACTED] the requested relief would add only [REDACTED] loaded movements per month to MNA's current operations.

¹¹ This is shown in Mr. Hughes' analysis by the reduction in MGT between the "Base" column and the "6.5 mtpy via Aurora" column for the Lamar-Carthage and Carthage-Aurora line segments. In the Aurora interchange scenario, the empty ISES trainsets would no longer move over these segments.

¹² This is shown in Mr. Hughes' analysis by the increase between the "Base" column and the "6.5 mtpy via Lamar" column for all of the listed segments.

¹³ For convenience, an online map of MNA showing these segments and other features is attached as Exhibit 1. Source: http://www.railamerica.com/Files/MNA/MNA_Dec01.pdf

Approximate MGT by Segment

Segment	Non-coal ¹⁴	ISES	Montrose ¹⁵	Current Total	6.5 mtpy via Lamar
KC-Nevada, MO	2.3	2.3	3.4	8.0	5.7
Nevada-Lamar	2.3	2.3	0.0	4.6	2.3
Lamar-Carthage	2.3	2.3	0.0	4.6	13.4
Carthage-Aurora	2.4	2.3	0.0	4.7	13.5
Aurora-Bergman	2.0	2.3	0.0	4.3	13.1
Bergman-Guion	1.3	2.3	0.0	3.6	12.4 ¹⁶
Guion-ISES	2.0	2.3	0.0	4.3	13.1
ISES-Newport	2.0	8.8	0.0	10.8	2.0

These figures show the following:

- With or without the loaded ISES movement, MNA is a low-density operation that comes nowhere near the 20 MGT that AECC witnesses Heavin and Brookings reference as the upper threshold of a low density line;

¹⁴ Assumes that (a) the $(4.6 - 2.3 =) 2.3$ MGT associated with MNA traffic other than ISES empties moving between Lamar and Carthage is representative of the non-coal traffic moving on MNA between Kansas City and Carthage; and, (b) the $(4.3 - 2.3 =) 2.0$ MGT associated with MNA traffic other than ISES empties moving between Guion and ISES is representative of the non-coal traffic moving on MNA between ISES and Newport.

¹⁵ Assumes that (a) the KCPL/Montrose plant served by MNA via Nevada, MO burns approximately 2.0 million tons of PRB coal annually; and, (b) the ratio of gross weight to net weight for the Montrose movement is equivalent to that for ISES (i.e., $(8.8 + 2.3)/6.5 = 1.708$).

¹⁶ Differs from Mr. Hughes' figure of 12.5 due to rounding.

- The MNA segments that currently handle the highest volumes are those between Kansas City-Nevada, MO and ISES-Newport, neither of which would be utilized by the proposed through route;

- On all of the segments that the through route would use (i.e., between Lamar¹⁷ and ISES), the amount of traffic other than the ISES movement is minimal, and on an MGT basis is comparable to or less than the current movement of one trainload per day of empty ISES railcars. Put another way, the single train per day in each direction of ISES traffic moving on the requested through route at the 6.5 mtpy level will account for 82-90 percent of the MGT on the segments it utilizes;

-Across all of the segments that the through route would use between Lamar and ISES, the highest MGT (13.5, between Carthage and Aurora) would be 25 percent higher than the current MGT handled by MNA on the ISES-Newport segment. On all other through route segments between Lamar and ISES, the percentage increase would be smaller;

- The requested through route will reduce MGT on the two segments where the current traffic density is the highest, including the Kansas City-Nevada, MO segment that handles the most non-ISES traffic of any MNA segment.

Collectively, these facts dispel the notion that the requested through route would be excessively disruptive to MNA's other traffic. MNA should generally be able to handle the single train per day in each direction required to move 100% of the ISES traffic, and the quantity of other traffic that would need to move, particularly on the segments associated with the through route, is small.

¹⁷ In its reply, MNA has reaffirmed Lamar as its preferred point of interchange (MNA Reply at 5), and no party has alleged that interchange at Lamar would be infeasible. This discussion therefore focuses on the Lamar interchange.

Also highly relevant to the consideration of infrastructure needs is the fact that, even with the entire loaded ISES movement included, the total number of loaded and empty ISES train movements MNA would perform is substantially less than the number performed by UP (MP) on this line 20+ years ago when it originally handled the ISES movement. UP notes that PRB coal trains are now longer and heavier than they were in the 1980's,¹⁸ but fails to acknowledge the extent to which these productivity increases have reduced train movement requirements. A 115-car train loaded with 100-105 tons per car would move around 11,800 tons, while a 135-car train loaded with 120 tons per car moves 16,200 tons. Delivery of 6.5 mtpy in the 1980's thus would have required about 1,100 loaded and empty train movements annually, while the same volume can now be delivered with about 800 movements. Therefore, any credible assertions regarding requirements for additional infrastructure MNA would need to serve the loaded ISES movement must begin with the recognition that train movement requirements have been reduced by approximately 27 percent since the last time ISES loads moved via the requested route.

INFRASTRUCTURE NEEDS

Based on the foregoing discussions of MGT and train movements, issues regarding needed interchange facilities and staging facilities are examined below. Also, UP's claims regarding deferred maintenance of track and ties are addressed.

Interchange facilities – UP attempts to create the impression that the potential interchange infrastructure at Lamar outlined by Entergy witness Crouch will be considerably more expensive than witness Crouch estimated. I understand that Entergy is responding to UP's specific claims. Above and beyond the defects in UP's analysis, UP completely disregards the fact that under the plain language of Section 10742, the obligation to establish suitable interchange facilities rests

¹⁸ UP Reply VS Gough at 7.

squarely upon the railroads involved. BNSF and MNA will make their own decisions about how best to accomplish the interchange and comply with the statutory requirement for a railroad to provide "...reasonable, proper, and equal facilities that are within its power to provide for the interchange of traffic...".¹⁹

For example, an individual with the experience of Mr. Hughes, if he were actually considering the actions within MNA's "power to provide" – rather than engaging in a result-driven exercise to inflate through-route costs – would consider the other options available to MNA and BNSF to ensure that the costs of upgrading the interchange are kept at reasonable levels. These include (a) making use of the existing siding at Lamar as needed to chamber trains; (b) relocating the existing Lamar siding; and/or (c) adjusting the crew change location relative to the point of physical interchange. Issues related to these strategies are discussed further below.

UP's describes in some detail the operational problems that would be associated with use of the current interchange facilities at Lamar.²⁰ Basically, a loaded ISES train would have to pass the point of connection between BNSF and MNA, stop on the busy BNSF main line, and back up through the connection to get onto MNA's mainline. The process would be slow and complicated by the presence of several public grade crossings. While UP's description is basically accurate, when it states that the trains delivered by BNSF would then block MNA's

¹⁹ The language of the statute raises a further question regarding the extent to which the Board should ascribe the costs of the interchange facilities to the requested through route. From an economic and public interest perspective, assessment of the reasonableness of improved interchange facilities may properly take into account many considerations not reflected in UP's criticisms. At Lamar, these include:

- the ability of current BNSF-MNA interchange traffic at this location to use the new facility, avoiding the adverse operational and community impacts associated with the current interchange;
- the ability of the new facility to substitute entirely for the existing facility, which would enable the materials from the existing facility to be salvaged; and,
- opportunities for the new facility to serve other new BNSF-MNA traffic (e.g., to/from trackage owned by MNA on the Bergman-Guion segment or in the Carthage-Joplin area, which is understood to be exempt from the UP-MNA interchange commitments), or to serve more efficiently BNSF-MNA traffic currently interchanged at other locations.

Absent consideration of such issues, any estimate of the construction costs of new interchange facilities may serve only as an upper bound on the cost that properly could be associated with the subject traffic.

²⁰ See UP Reply VS Wheeler-Plum at 5.

main line until MNA could send a crew to the train, it omits one critical detail – at the same time the head end of the loaded train cleared the BNSF main line, the trailing end of the train would be sitting in (or on the main line next to) MNA’s long existing siding at Lamar.

The presence of this long siding so close to the BNSF-MNA interchange raises various possibilities for economizing on the interchange facilities that would be needed to support the ISES movement. For example, especially at the lower volume scenarios under consideration, it would be realistic to consider operating with a minimal connection in the southwest quadrant of the BNSF/MNA crossing that would enable the ISES trains to move directly between the two main lines. In this approach, a loaded train moving from BNSF would be placed by the BNSF crew under a “Plan A/Plan B” strategy.

Plan A would involve simply parking the train on the MNA mainline between 21st and 30th Streets, where UP apparently agrees it would block no public grade crossings. This plan would be used in cases where MNA knows it can supply a crew and move the train before the mainline is needed for another movement. In view of the light volume of traffic on MNA’s line and [REDACTED]

[REDACTED] Plan A likely would be used most of the time.

In the event MNA was not prepared to move the train to clear the mainline in a timely manner, BNSF would place the train pursuant to Plan B. This would involve pulling onto the MNA mainline, then backing the train into the existing Lamar siding.²² Alternatively, with a

²¹ An informal review of ISES train movement records supplied by UP indicates that [REDACTED]

²² It is noted that the existing siding appears to be traversed by at least one public grade crossing. This is somewhat unusual, since sidings, by their nature and function, tend to hold trains for periods of time. If this is a problem, it would be possible to construct a short bypass for vehicular traffic, or to extend the existing siding to avoid creating a blockage, with either option far less expensive than the estimates developed by UP. [Footnote continued]

rudimentary connection in the southwest quadrant of the crossing, if use of the existing Lamar siding proves to be excessively problematic the existing Lamar siding (ties, track, switches, etc.) could simply be moved to the clear location indicated by Mr. Hughes.²³ As part of this strategy, MNA undoubtedly would consider the obvious possibilities that (a) the need for the larger of the two bridges at this location discussed by Mr. Hughes has been mitigated by the construction of the dam at Lamar Lake; and, (b) the smaller bridge was overdesigned for the area it actually drains, and potentially could be replaced by a simple culvert.

A third possibility would be to move the location of the crew change relative to the location of the physical intersection of the BNSF and MNA lines. At both ends of its main line, MNA currently makes use of trackage rights over UP (from Pleasant Hill, MO to Kansas City, and from Diaz Junction to Newport, AR) to move trains to locations that support efficient interchange. MNA and BNSF would certainly have an incentive to investigate the possibility that the same type of approach could support efficient interchange via Lamar.

Any of these approaches would offer the prospect of establishing an appropriate MNA-BNSF interchange capability – including the ability to chamber a loaded or empty train clear of the main lines of both railroads - at a cost far lower than that indicated by Mr. Hughes. When MNA and BNSF review their obligations under Section 10742 to establish suitable interchange facilities, there is no reason for the Board to expect that they would elect to pursue the gold-plated approach described by Mr. Hughes.

It is also noted that restoration of the former connecting track between the BNSF and MNA lines in the northwest quadrant of the crossing would entail comparatively little new construction, and would enable the loaded ISES trains to run off BNSF directly into the existing MNA siding at Lamar. However, on MNA the train would effectively be reversing direction, prospectively introducing operational complications.

²³ UP Reply VS Hughes at 37-40.

It should also be noted that any costs associated with establishing or improving the capability to chamber a train at the point of interchange may be defrayed at least in part by the operating cost savings this capability would produce. When a crew can drop one train and pick up another one for a reverse movement, unproductive crew deadheading time and costs can be greatly reduced. In this context, it can be seen that the current pattern of movement for ISES traffic between Kansas City and the plant, which is based almost entirely on directional operations, tends to create crew deadheading. The introduction of the balanced operations contemplated in the requested through route, all else equal, should reduce crew deadheading and related costs.

Staging facilities – UP claims that additional staging facilities would be needed for MNA to be able to support the ISES movement. UP has constructed such facilities at Newport, which enable UP to maintain its operations in the presence of “clustering” of ISES trains that may arise on UP’s network (i.e., when trains arrive faster than MNA crews can remove them) and unloading delays at the plant. UP also uses tracks at Neff Yard in Kansas City to hold empties received from MNA pending the remainder of their return movement to the PRB.²⁴ However, UP’s claims that MNA would need to construct similar facilities overlook completely the ability of MNA to manage the staging of ISES trains using its existing inventory of sidings. MNA can’t manage the staging of loaded trains for UP in this way, because it has no long sidings between Diaz Junction and the plant. However, MNA has more than enough long sidings between Lamar and the plant to provide the buffer capacity UP indicates is needed for ISES traffic. Indeed, combined with the 3 trains that can be held if needed on existing trackage at the plant, MNA has enough long sidings to hold the entire fleet of trainsets needed to serve ISES. Especially in light

²⁴ UP Reply VS Wheeler-Plum at 10-11.

of the reduced number of train movements MNA must execute relative to UP (MP) on the same line in the 1980's, it is implausible for UP to assert that more infrastructure for staging is required for MNA to serve ISES from the northwest. If anything, UP's evidence shows how the through route would yield a net reduction of staging facilities, because the reliance on existing MNA sidings would obviate the need for staging trackage UP currently requires at Newport and Kansas City. In this light, the fact that UP has expended resources to create extra staging trackage (while simultaneously creating unused excess capacity on the MNA line) forms an additional dimension of the inefficiency associated with UP's shift of the ISES movement to the Oklahoma route.

Sidings - UP also advances specific assertions regarding the need for establishing a long passing siding on the MNA segment between the current long sidings at Crane and Bergman, and the difficulties associated with establishing a long siding at the candidate locations of Gretna or Davis.²⁵ I have conducted further investigations related to these assertions, and find that they are unlikely to impose the burdens on the requested through route that UP postulates. First, to assess the significance of the comparatively long distance (62 miles) between the long sidings at Crane and Bergman, I reviewed ISES train movement data to determine typical operating speeds for this portion of MNA, and the time required for a train to clear this segment. Using the method described in further detail below, I determined that 80 percent of ISES empty trains would require no more than about [REDACTED] hours to traverse this segment.²⁶ Given the limited number of total train movements that currently occur on this segment, and the fact that the requested through route would add at most an average of one train per day to that low total, it is not

²⁵ UP Reply VS Wheeler-Plum at 15-17.

²⁶ Calculated based on the time required to traverse the Cotter-Carthage segment (which subsumes the Crane Bergman segment) as follows: ([REDACTED] to traverse Cotter-Carthage segment/147.03 miles of Cotter- Carthage segment) x (62.4 miles of Crane-Bergman segment).

obvious that creation of a long siding in this segment is a necessity, especially at the lower ISES volume scenarios.

If experience reveals that a passing capability within this segment is needed intermittently, UP has not mentioned the apparent opportunity at Gretna for long trains to pass by cutting the empty train, placing most of it in the existing siding and the remainder on other nearby trackage off the mainline. If creation of a long siding is eventually found to be needed, I expect that further engineering analysis would favor a southward extension of the existing Gretna siding, and that such an extension would not be unduly difficult.

Deficits in spending on rails and ties – Witness Hughes alleges the existence of significant “deficits” stemming from the levels of MNA’s expenditures on rails and ties since 1992.

I understand that AECC rebuttal witnesses Heavin and Brookings are addressing certain engineering issues associated with Mr. Hughes’ allegations, as well as his analogous allegations for ballast, bridges, and tunnels. My statement focuses on the fundamentally illogical nature of Mr. Hughes’ analysis procedure for rails and ties and its inconsistency with known facts. All that Mr. Hughes actually shows is the importance from an efficiency perspective of moving loaded PRB coal trains over the shortest route.

In his assessment of the rail “deficit”, Mr. Hughes basically claims that MNA should have been performing a programmed replacement of rail since it began operation in 1992. He relies on the general proposition that used rail tends to cascade to lighter-density use, and portrays the 112-pound rail found in some locations on MNA as inadequate for movement of PRB coal trains.

Mr. Hughes ignores completely the fact that UP moved PRB unit coal trains to ISES over this route for a period of several years in the 1980's, and during that time invested substantially in the line specifically to bring it to standards suitable for such operations. Although UP did install heavier rail on some curves, it left in place – and in some locations installed more of – the used 112-pound rail Mr. Hughes discusses.

While Mr. Hughes styles his commentary as criticism of the Entergy and AECC engineering witnesses, the practice of recycling selected vintages of 112-pound rail into CWR for use by intermittent heavy-haul movements apparently was pioneered by William E. Wimmer of UP. Indeed, by Mr. Wimmer's account he only became an employee of UP because his previous employer (likely a graduate of the Hughes school of track maintenance) reacted poorly after Mr. Wimmer elected to re-use 112-pound rail in CWR for intermittent heavy-haul movements.²⁷ UP valued Mr. Wimmer's engineering insights enough that they not only didn't fire him, but eventually promoted him to be Vice President-Engineering. Mr. Wimmer also was named the 2007 Railroader of the Year by Railway Age, only the second chief engineer ever to receive that award.

If Mr. Hughes had done a little more research, he might have noticed that the old 112-pound rail currently in place on the MNA segment between Pleasant Hill and Nevada, MO for approximately 20 years has served the PRB coal unit train movement to the KCPL/Montrose powerplant at Ladue, MO, and carries by far the highest MGT of any MNA segment north of ISES. Contrary to Mr. Hughes' portrayal, the historical experience of MNA indicates that the ISES movement can anticipate a lengthy period of reasonable service from the 112-pound rail

²⁷ See http://goliath.ecnext.com/coms2/gi_0199-62655556/Bill-Wimmer-building-Union-Pacific.html and https://www.uprr.com/newsinfo/releases/human_resources/2007/0112_wimmer.shtml .

south of Lamar. His ill-informed attempt to criticize the Entergy and AECC engineering witnesses does not alter this.

There simply is no evidence that substantial up-front investment in rail would be required to operate the requested through route. Mr. Hughes indicates that rail should be replaced based on demonstrated need. With rail already put in place by UP to handle PRB coal unit trains, it is not surprising if MNA has faced little need to replace rail. The attempt by Mr. Hughes to demonstrate a rail investment deficiency rests on a methodology that does not withstand scrutiny, and ignores UP's own engineering of this line as well as the demonstrated performance of the rail in question.

Obviously, the movement of loaded PRB unit coal trains south of Lamar will tend to accelerate rail wear for MNA, as it would for any rail line. The higher rail wear associated with movement of PRB coal trains demonstrates not that there has been any deficiency in MNA's rail replacement practices, or that MNA would need to make any particular up-front investment in rail to be able to operate efficiently and safely. Rather, it demonstrates a major reason why it is important for such heavy haul traffic to move via the shortest route.

Similar problems arise in Mr. Hughes' analysis of MNA's tie replacement. Mr. Hughes states as an objective the replacement of ties at a rate sufficient to maintain "a constant average tie age", but then completely ignores the fact that UP invested in substantial tie replacement on this line in the 1980's during the period of its use by PRB coal unit trains. Based on the 35-year life expectancy of ties cited by Mr. Hughes, ties replaced by UP between 1984-1989 should not require replacement until, on average, 2019-2024. If, as Mr. Hughes' data show, MNA performed comparatively little tie replacement between 1995-2002, there is no reason to believe

this reflects anything other than the transition of the line to lighter-duty use following the heavier use and more intensive level of tie replacement during the 1980's.²⁸ Indeed, Mr. Hughes' own data show that for 5 of the most recent 7 years, MNA's tie replacement has been at or above the "required" level he calculates. There is no basis for believing there is a substantial tie replacement "deficit", as Mr. Hughes postulates.

Again, the only valid information that comes out of this portion of Mr. Hughes' testimony is his observation that the wear on ties imposed by "long trains with heavy loads" is disproportionately high. This reaffirms the importance from an efficiency perspective of moving such trains over the shortest feasible route. It is precisely because of the disproportionate wear on track, ties, and other infrastructure that, all else equal, the shortest route is preferred from an efficiency perspective for heavy-haul PRB coal movements.

RELATIVE EFFICIENCY OF UP ROUTE

The need to minimize the length of haul to minimize the resource consumption associated with movement of PRB coal unit trains and other heavy-haul traffic is basically a mathematical identity. While there undoubtedly are different nuances of cost causality associated with operations on different lines, it is impossible to escape the fundamental fact that it is most important to minimize unnecessary movement for traffic that is the most difficult or damaging to move.

Notwithstanding this fundamental fact, UP rebuttal witnesses offer various analyses that purport to show that UP's existing route is more efficient than the proposed through route. These efforts include an "URCS" analysis, a tabulation of line curvature, and simulations of cycle times

²⁸ It also cannot be ruled out that MNA itself performed a comparatively intensive level of tie replacement during the period of its initial operations. Mr. Hughes' own data show that MNA's tie replacement was above the "required" level in 1994, and he curiously reports no values for 1992 and 1993.

and fuel use. As shown below, these analyses depend on assumptions and methods that render them unusable or irrelevant, and in some instances reinforce directly the need for the requested relief.

URCS

UP puts forward an analysis that purports to reflect a tabulation from URCS, but on its face depends on so-called “movement-specific adjustments” that modify the computations (and resulting output) to incorporate considerations of interest to the analyst(s). Here, one need proceed no further than the first adjustment to find corroboration that opening the shortest route would be consistent with the efficiency objective of Section 10705. Specifically, UP reply witnesses Plum and Newland claim that URCS needs to be adjusted because the URCS methodology assumes empty cars will be returned over the route used by the loaded movement, but here the empties move from ISES to Kansas City via the MNA route, which is shorter.²⁹ It is not news to Entergy/AECC that the MNA route to ISES saves substantial mileage relative to the UP route. However, UP’s witnesses don’t seem to recognize that the same “shortness” that makes the MNA route preferable for the empties is even more beneficial for the loads (i.e., due to the heavy haul issues discussed previously).

For this reason, the claim of UP’s witnesses Plum and Newland that the total length of the UP route (including the empty movement via MNA) is not much higher than that of the proposed through route³⁰ is quite misleading. By comparing “round trip” mileage, the shorter empty return movement on the UP route essentially camouflages the longer loaded movement. In reality, the loaded movement is the principal source of ton miles and the principal source of

²⁹ UP Reply VS Plum-Newland at 4.

³⁰ UP Reply VS Plum-Newland at 5.

costs. A shorter loaded movement is more beneficial to the railroad and to economic efficiency than is a shorter empty movement.

This can be illustrated by a simplified example in which service via a “UP route” from Kansas City to ISES (with a short empty return via MNA) is compared to a “hypothetical through route” that has the same “total mileage” as the “UP route”, but equal loaded and empty miles (note that this is a hypothetical route; it does not represent the proposed through route, which is shorter, even on a round trip basis, than the UP route):

	“UP Route”	“Hypothetical Through Route”
Loaded Miles	550	475
Empty Miles	400	475
Total Miles	950	950
Loaded GTM (millions)	4840	4180
Empty GTM (millions)	920	1093
Total GTM (millions)	5760	5273

This shows how, even if the UP route had “total mileage” equal to the through route, the fact that it handles the loaded portion of the movement on a circuitous route creates significantly higher GTM’s (and GTM-related costs) in comparison with the through route. It also shows how, due to the much higher gross weights of loaded trains compared to empty ones, the mileage of the loaded movement is a much more accurate indicator of GTM-related costs than is UP’s “total mileage” measure.

Basically, UP's "total mileage" measure serves to conceal the generation by UP of close to 500 million needless and inefficient GTM's each year to accomplish the loaded movement via UP's circuitous route. The actual GTM difference is even higher than this, because by UP's own admission the proposed BNSF-MNA through route enjoys a small advantage over UP's route even on UP's "total mileage" measure.

While UP's URCS adjustments illuminate (inadvertently) the importance of the loaded mileage as a cost driver, and the comparative inefficiency of the UP route, UP's adjustments seem to have stopped short of incorporating anything that would reflect MNA's advantages over UP in unit costs and operating flexibility, which are shown explicitly in UP's own data.³¹ All else equal, if a feasible short route that entails lower unit costs is not found to possess a cost advantage over a substantially longer route that has higher unit costs, such a result calls into question the credibility of the analysis rather than the viability of the shorter route.

Curvature

UP witnesses Plum and Newland present a tabulation purporting to show the cumulative degrees of curvature for the existing route compared to the proposed through route.³² Beyond anecdotal suggestions, UP offers no demonstration linking the measured curvature to any specific magnitude of cost. Indeed, the measurement used does not distinguish between shallow curves vs. sharp ones, the fact that many of the curves on the through route occur on a gentle river downgrade, the speed at which they are traversed, the presence of track lubrication devices, or any of numerous other factors that realistically could affect the relationship between curves

³¹ For example, UP's discovery materials indicate that the cost of having MNA perform contemplated maintenance on the MNA line would be approximately [REDACTED] compared to the cost UP would incur to do the same work. For some specific work items the differences is even more dramatic. See UP-HC-0015102 (compare [REDACTED]).

³² UP Reply VS Plum-Newland at 10-11.

and costs. There is no basis for believing that this tabulation shows anything that offsets the mileage advantage of the through route.

Indeed, much more interesting than UP's strained attempt to make an issue out of this secondary characteristic is its omission of any claim that the proposed through route would have a disadvantage with respect to ruling grade in comparison to UP's route via Oklahoma. UP reply witness Gough references grade issues as being a consideration in UP's decision to switch the loaded ISES trains to the Oklahoma route,³³ but it would not be valid to extend that consideration to the proposed through route. As UP noted in its reply argument,³⁴ the proposed through route does not make use of the portion of MNA between Kansas City and Lamar, which was UP's only option to reach ISES directly using the line that now is MNA. However, that northern portion of MNA line, in the area immediately south of Kansas City (where MNA operates on trackage rights over UP), includes an ascent of a steep (1.3+ percent grade) hill at Independence (MO), a climb that is especially arduous for heavy-haul traffic. The proposed through route using BNSF's line from Kansas City to Lamar bypasses this troublesome segment, which leaves the proposed through route facing the same 1.0 percent ruling grade encountered by PRB coal trains moving on UP. With the same ruling grade, UP does not dispute that the proposed through route will be able to operate trains with basically the same numbers of cars and locomotives as does UP. In this way, the proposed through route combines the "best of both worlds" – it operates with the same "technology" as UP, but does so over a much shorter route to get each load to the plant. It is these strong fundamentals, and not curved rails, that define the strength of the through route relative to UP's Oklahoma route for the ISES movement.

³³ UP Reply VS Gough at 6.

³⁴ UP Reply Argument at 49-50.

Fuel use and cycle time simulations

UP reply witnesses Plum and Newland also present results from computer simulations that purport to show fuel use and cycle time advantages on the part of the current UP route.³⁵ These simulations are based on assumptions that plainly are unrealistic, and have no discernible relevance to the issues before the Board in this proceeding. For example, the simulations explicitly assume “unopposed” operations in which the train is simply run across the given route without interference from other traffic, and that the trains are run at the “maximum possible speed given available locomotive power and resistance conditions”. However:

- the Railroad Performance Measures database³⁶ shows plainly that UP’s coal trains run at speeds considerably lower than its intermodal and automotive movements, and nowhere near the high MAS at which it theoretically would be possible to operate on most of UP’s mainline routes;
- the simulation assumptions are inconsistent with the evidence in this proceeding, which indicates that UP has congestion issues on different parts of its system (including the Little Rock terminal area traversed by its route to ISES³⁷), and that it requires staging facilities at Newport and Kansas City to mitigate such congestion and bunching by holding loaded and empty trains en route.³⁸
- the simulation results have not been validated against any known performance benchmarks.

³⁵ UP Reply VS Plum-Newland at 8-10.

³⁶ See <http://www.railroadpm.org/home/RPM/Performance%20Reports/UP.aspx> . This website reports various measures of system performance and fluidity/congestion gathered in a consistent format for six Class I railroads.

³⁷ See AECC Rebuttal VS Heavin-Brookings.

³⁸ As discussed above. See UP Reply VS Wheeler-Plum at 10-11.

This last issue is especially important, because a validation step is about the only protection for the user of simulation model results against GIGO (“Garbage In; Garbage Out”) problems.

Courtesy of lecture notes from the Computer Science and Engineering department at Michigan State University, validation of a simulation model is further described as follows:

“Validation: concerned with building the *right model*. It is utilized to determine that a model is an accurate representation of the real system. Validation is usually achieved through the calibration of the model, an iterative process of comparing the model to actual system behavior and using the discrepancies between the two, and the insights gained, to improve the model. This process is repeated until model accuracy is judged to be acceptable.”³⁹

To determine the extent to which UP’s simulation model provides “an accurate representation of the real system”, I reviewed the ISES train movement data supplied by UP. Specifically, I performed a test of the accuracy of the finding from the UP simulation model that the circuitous route used by UP to serve ISES provides lower transit times in comparison with the through route using MNA. This test entailed comparison of actual transit times between trains using the two routes. Since the train movement data are not known to include any observations of loaded trains moving to the plant via MNA, the test involved comparisons of empty train movements.⁴⁰

To perform this test, I identified train movement records that appear to show complete records of in-service empty returns originating at ISES and passing through Kansas City enroute to the PRB. I selected such data only from 2008 and the small number of observations included

³⁹ See www.cse.msu.edu/~cse808/note/lecture11.ppt at page 2.

⁴⁰ While most ISES empties return to Kansas City via the MNA route, the periodic use by ISES empties of the Oklahoma route provides sufficient data from which to make a validation assessment.

in the dataset from early 2009, and segregated the data into two groups: movements via MNA and movements via UP's route through Oklahoma.⁴¹

In examining these data, I noted first that there is considerable variation in transit times within each group. Movements that appear to reflect prompt handling are interspersed with observations that show much slower progress. Based on the distribution of values, I was concerned that computed means could be misleading, since they could be influenced by the presence of outliers, and not indicative of the performance of a route for the substantial majority of traffic using it. After further investigation, I concluded that UP and MNA share this general concern, since they have structured the [REDACTED] [REDACTED] on the basis of 80 percent of the movements meeting or beating [REDACTED].⁴² In my validation analysis, I adopted this "80th percentile" standard as the basis for comparing the performance of the different routes.

The results of my validation analysis are as follows:

- For 2008 and early 2009 as a whole, MNA achieved an 80th percentile performance of [REDACTED] in moving ISES empties to Kansas City;
- For the second half of 2008 and early 2009, MNA's 80th percentile performance [REDACTED]. My interpretation of this is that MNA became [REDACTED]

⁴¹ It is noted that UP's route through Oklahoma for empties returning from ISES to Kansas City normally appears to entail movement via [REDACTED]. This appears to be one of many places on the UP network where [REDACTED].

⁴² This standard was incorporated in [REDACTED]. See UP-HC-0014524.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED];

- In comparison with these figures for the MNA route, the 80th percentile performance of the UP route via Oklahoma is [REDACTED].⁴³

From this validation test, I conclude that UP's simulation model does not provide acceptable accuracy, and is not an accurate representation of the real system. In the real system, notwithstanding all of UP's claims regarding [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

In short, UP's computer simulations are based on such unrealistic assumptions that they do not represent real world conditions. Data from the real world reaffirm the importance of loaded route mileage as the fundamental indicator of efficiency in this proceeding, and the advantages to ISES of relying on MNA rather than UP's Oklahoma route.

SERVICE

The Entergy/AECC request for relief under Section 10705 explicitly seeks to introduce market forces in part so that ISES experiences market levels of service, rather than those

⁴³ Spot checking of several additional observations that contained less-than-complete records of empty returns to the Basin, including several observations of empty movements between ISES and [REDACTED], corroborated the [REDACTED]

determined by the exercise of UP's market power. This portion of the Entergy/AECC request stems from the occurrence of multiple, sustained episodes of highly inadequate service on the part of UP. The issue here is not whether UP would physically be able to win a drag race with MNA under the assumptions stated in UP's cycle time simulation, or even the accuracy of UP's claims that its cycle times are better than BNSF's. (Indeed, by UP's rationale, it wouldn't matter to shippers if BNSF disappeared altogether.)

Rather, the issue is whether the availability at ISES of service from the through route would protect ISES against future recurrences of profound and extended service inadequacies by motivating UP to ensure that they do not occur or by providing ISES with a tangible option for alternative service. Section 10705 does not mandate a particular level of service; it provides for the introduction of market forces where inadequate service has been provided by a carrier that did not face meaningful competition. ISES can't burn simulated coal, and UP's simulated performance cannot substitute for the service performance provided by market forces under the statute.

ROUTE MILEAGE STANDARD

In light of the foregoing, there are several reasons why it is appropriate for the Board to rely in this proceeding primarily or entirely on a loaded route mileage standard to assess efficiency:

1. Route mileage has a history of recognized relevance for heavy haul movements.⁴⁴

⁴⁴ In Finance Docket No. 32760 (UP/SP Merger), for example, the Board granted (and expanded upon) a request by Texas Utilities Electric Company for a condition establishing an interline route for PRB coal movements to a large powerplant, notwithstanding the fact that the same carrier served the origin and destination points, solely on the basis that the interline route was shorter than that carrier's single-line route, and that the route needed to be short to be competitive with another carrier's short (single-line) route. Decision No. 44 (served August 12, 1996) at 186.

2. In this case, the ruling grades and the train sizes and consists are essentially the same between the routes being compared. With these fundamental parameters the same, there is no reason to believe secondary characteristics of the routes would meaningfully counteract the loaded mileage differences.
3. In this case, efficiency differences stemming from mileage differences may exacerbate service inadequacies when they occur. If/when UP experiences an operational problem on its network, its use of a circuitous route may detract from the service it provides to ISES. All else equal, movement of a given train over a circuitous route consumes incremental locomotive time, crew hours, track capacity, etc. If UP faces binding constraints on any of those factors, it would be able, all else equal, to maximize its throughput by giving priority to the movements that consume the smallest amount(s) of the scarce resource(s). To the extent that the circuitous UP route is an inefficient consumer of scarce resources, UP could experience pressure to limit or downgrade its service.
4. In this case, UP's market power gives it a perverse incentive to favor its circuitous route over a more efficient direct route. The 180 percent R/VC jurisdictional threshold in some circumstances may cause increased costs on a movement to yield increased net revenues for the carrier (i.e., because 80 percent of a larger cost is greater than 80 percent of a smaller cost). Given that the function of Section 10705 is to mitigate, not facilitate, harms stemming from the exercise of market power, the Board should be particularly wary of setting any precedent that prospectively would create a benefit for the carrier from use of a circuitous route.
5. Ultimately, in this case, UP reply witness Gough torpedoed the proposition that UP's long route is better than the MNA direct route. On page 6 of his reply VS, Mr. Gough states

that to secure Entergy's acquiescence in the switch to the Oklahoma route, UP had to offer Entergy a rate concession offsetting Entergy/AECC's increased railcar costs. If the Oklahoma route were really faster than MNA, Entergy/AECC would realize shorter cycle times and achieve savings through a reduced fleet size. If the lack of curves on the Oklahoma route really produced a meaningful reduction in wear, Entergy/AECC would realize reduced fleet maintenance requirements, since the reduction in wear occurs at the interface between Entergy/AECC's railcars and UP's track. The fact that UP had to offer rate concessions to secure Entergy's consent to the new route corroborates the central importance of the shortest route for heavy haul movements, and belies UP's assertions to the contrary.

OTHER ISSUES

Floods

UP refers repeatedly to the proposition that the risk of floods on MNA is a consideration that somehow detracts from its suitability for the proposed through route. I understand that AECC rebuttal witnesses Heavin and Brookings are addressing this issue. In addition to their comments, I submit that the following considerations also dispel this spurious argument:

- UP provides no evidence and I am aware of no evidence that any flood on MNA has ever required such a long recovery time as to tax the coal stockpiles normally maintained at the plant;
- UP has had no qualms about relying on MNA for its own purposes, including the movement of ISES empties to Kansas City, and its [REDACTED]

UP apparently wants the Board to act on the basis of what UP says, rather than what is does;

- Other than the empty ISES trains, which UP is physically capable of moving to Kansas City without using MNA north of the plant, MNA between Lamar and ISES normally handles about 10 percent of the volume that would qualify it as a low-density line. The fact that MNA has operated at ultra-low densities for almost 20 years shows that the flooding issue is a red herring – if flooding frequently produced any type of extensive damage, the economics of the line would almost certainly lead to embargo(es) and abandonment(s);
- UP assumes implicitly, and without explanation, that in the event of the type of flooding it describes, the Board would take no action pursuant to its authority under Section 11123 despite the Board's stated intention to do so.⁴⁵

UP may want the Board to forget the fact that during the past 18 years the major service inadequacies experienced by ISES have originated from events and conditions on the UP network, and have had nothing to do with flooding or any other issues related to the dependability of MNA's service.

⁴⁵ While the Board has mentioned Section 11123 as a possible basis for remedial action in the event of rail service problems, the severity of the episodes of inadequate service at ISES has rendered this remedy infeasible. Indeed, in the UP/SP merger-related episode of 1997-1998, the Board denied efforts by shippers to obtain emergency service, including a specific effort by Entergy to obtain emergency service at the White Bluff powerplant, based on a stated rationale that orders for such service could interfere with UP's recovery efforts. In the Joint Line episode that began in 2005, ISES experienced significant service problems over UP's entire period of force majeure (196 days) and for most of the term of its embargo (which was not lifted until March 27, 2007). However, by statute, emergency service orders are brief, and can be extended to a total of no more than 240 days. Although emergency service remedies may be useful in some circumstances, including the types of floods projected for MNA by "Noah" Hughes, the Board has no basis to expect that such remedies would be more effective in the future than they have been in the past for service inadequacies of the magnitude and duration that have occurred at ISES.

Revenue impacts

UP asserts that Entergy/AECC's request does not comport with Board requirements because it does not include analysis of the revenue impacts of the request on the involved carriers.⁴⁶ The Board's order served June 26, 2009 itemized several types of information it expected to see presented in this stage of the process, including "...the revenue associated with the traffic, the relative costs of moving traffic on the alternative routes and the volume of traffic that could be expected to move over the alternative route." The "revenue associated with the traffic" flows directly from volume and rate levels. Current rates (including per car rates paid by UP to MNA for its current handling of loaded and empty trains), volumes available to move at different points in time, and URCS costs for current and BNSF/MNA routes, are all in the record, and based on that information the Board is able to consider revenue and contribution issues it may deem to be relevant. The Board's order specifically appeared to contemplate that carrier-level revenues, including whether or not there would be a contract with BNSF that would compel a separately-challengeable rate from MNA, etc., would not be determined until a future time, so UP's interest in carrier-level revenue impacts appears to be, at best, premature.

More generally, it is important to note that Section 10705 on its face does not require consideration of carrier revenue impacts, and in the circumstances of this proceeding is being invoked to address significant resource misallocations stemming from insufficient market forces. Such resource misallocations have far greater economic significance than would the distributional impacts of the revenue changes. Indeed, the principal beneficiary of the prospective revenue change, MNA, is compelled to oppose the requested relief because it has no confidence that the Board will protect it against punitive responses by UP. UP cannot credibly

⁴⁶ UP Reply Argument at 68-9.

assert any type of failing firm defense, and MNA has no “essential services” argument stemming from revenue impacts.⁴⁷ Under these circumstances, it is appropriate in this case for the Board to defer or waive any information requirements it might apply in other circumstances pertaining to carrier revenue impacts.

Compensation

UP’s argument about receiving no compensation for the use of its property is unavailing. By UP’s own description, MNA has never paid any rent for its use of the leased assets, even for traffic MNA has interchanged with BNSF. UP has already been compensated for the use of the assets leased by MNA through the labor, capital, and maintenance cost savings it received at the time of the spin-off, and through the contribution it achieves on its interline traffic handled by MNA.

UP spun the lines off to MNA to take advantage of the cost savings (particularly in labor) that shortline operations make possible, while continuing to earn revenues from its customers. UP’s objective was never to earn rental income from MNA. The value to UP of the spin-off was increased by including ISES, which was an unusual feature of this shortline spin-off. The penalty rent provisions were not intended to generate rental income to UP but to limit MNA’s participation in alternative, non-UP routings.

UP is protected against degradation of the line’s infrastructure associated with movement of BNSF-MNA interline traffic by the terms in the MNA lease that make MNA responsible for maintaining the line in a specified condition. However, UP’s loss of contribution from movements via the requested through route is the type of consequence a carrier faces when

⁴⁷ The only threat to services is posed by UP’s stated intent to use its contractual arrangements with MNA to thwart relief the Board may order in this proceeding.

another carrier obtains competitive access to serve previously-captive traffic. Indeed, for competitive access remedies to be effective in deterring the types of conduct they are designed to address, they must go beyond a simple correction of the resource misallocations that can arise from the exercise of market power. If railroads are confident that the Board will preserve much or all of their contribution in this type of circumstance, they will have no incentive to consider the efficiency (i.e., circuitry) and service ramifications of actions they may consider that relate to their captive traffic.

SUMMARY

In the 1980's, UP diverted the ISES movement from the direct MP route via Carthage to its much longer route via Oklahoma. It added so much mileage that the ISES traffic no longer moved on the shortest route. From the plain language of Section 10705, UP could and should have known that the creation of this circuitry introduced an element of regulatory risk. It further could and should have known that providing poor service would compound the risk. UP took both of these chances, in order to maximize the benefits it received from the spin-off.

UP's efforts in its reply to duck its responsibility for this course of events are unpersuasive. While UP has strived mightily to orchestrate a negative view of the requested relief, the content of the material UP has presented reaffirms the importance of loaded mileage in assessing the efficiency of heavy haul routes. UP's tabulations of curvature and unrealistic simulation models do not provide a legitimate basis for the Board to disregard all of the unavoidable effects of UP's circuitry on GTM-related costs, the effects of those extra GTM's on UP network congestion (including the Little Rock terminal area addressed by AECC's witnesses), UP's own testimony regarding the unique wear generated by heavy-haul movements, UP's duplicative use of resources on staging facilities (while creating unused excess capacity on

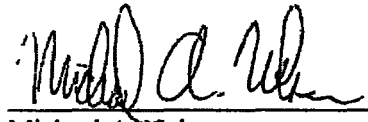
MNA) and the Board's past acceptance of mileage as the primary indicator of efficiency on heavy-haul movements.

UP has not provided credible evidence showing a need for the Board to deviate in this case from the mileage standard it has used previously for heavy-haul movements. Indeed, because service inadequacy is also an issue in this case, the efficiency standard should be applied with heightened stringency, since inefficiency in the form of resource consumption can exacerbate service problems (i.e., by inflating the resources required to provide good service).

Provision of relief under Section 10705 is needed here because ISES cannot realistically rely on temporary relief for the types of problems it has experienced. The evidence shows the requirements for its application have been satisfied here.

VERIFICATION

I, Michael A. Nelson, declare under penalty of perjury that the foregoing
is true and correct. Further, I certify that I am qualified and authorized to file this
verified statement.



Michael A. Nelson

Executed on July 6, 2010

REBUTTAL VERIFIED STATEMENT

OF

JERRY W. HEAVIN and DAVID W. BROOKINGS

**REBUTTAL VERIFIED STATEMENT
OF
JERRY W. HEAVIN and DAVID W. BROOKINGS**

We are Jerry W. Heavin and David W. Brookings, independent railroad engineering consultants. We each have approximately 40 years experience in the railroad industry. We previously submitted a verified statement in this proceeding in the opening evidence and argument of Arkansas Electric Cooperative Corporation (AECC). A summary of our experience is provided in our opening verified statement.

In this rebuttal verified statement we respond to contentions made by witnesses for Union Pacific Railroad (UP) in UP's reply evidence and argument. In summary, this rebuttal statement shows:

The MNA line is suitable as a part of a through route for unit coal trains between the PRB and Independence. The MNA routing would be superior to the existing UP route in several important respects. Establishment of the through route would require a limited amount of infrastructure investment commensurate with the volume of traffic that would move over the route.

The Characteristics of the MNA Route Do Not Offset its Mileage Advantage vs. UP

UP witness Hughes claims that the route proposed by AECC and Entergy is a "poor" candidate for the service in question (Hughes Reply VS at 2, 6). This assertion is flatly inconsistent with both the historical and current uses of the line. The MNA line was used to handle PRB unit coal trains to the Independence station in the past, and it

successfully handles unit grain train shipments today. While it is true the MNA route is not perfect, it is entirely suitable for unit coal train operations.

The northern portion of MNA, which was part of the original route to Independence for PRB coal, still handles the movement of loaded PRB coal trains from Kansas City to the KCPL Montrose powerplant at Ladue, MO (via Nevada, MO on the MNA main line). This substantial movement (154 miles) on MNA traverses the steep ascent (exceeding 1%) of the hill at Independence, MO. While the curvature is not as severe as found south of Aurora, we note that 2 to 3 degree curves are common and the 112# to 119# rail that Mr. Hughes contends is not capable of handling unit coal traffic is in use as well. MNA has shown the capability to serve this customer for more than 20 years.

Mr. Hughes is simply incorrect when he implies (Hughes Reply VS. p 6) that the only places one finds unit coal trains operating in topography such as MNA is in the Rocky Mountains or the Appalachians. He need look only a few miles west to find the Kansas City Southern (KCS), a railroad that has more rise and fall than MNA, mainline curves up to 10 degrees, a curve design standard of 4 to 6 degrees, and grades much more severe at 1.5%. One to two additional locomotives are required on the KCS route relative to those needed on MNA. In 2008 KCS handled an average of 4 to 6 loaded 125- to 135-car heavy axle unit coal trains per day, far above the number expected on the MNA line. Annual tonnages exceed 40 MGT in the heavy curve and grade territory, 3 times even the maximum calculated by Mr. Hughes.

Also, the BNSF Thayer Subdivision (Springfield, MO to Memphis, TN) parallels the MNA to the east and handles unit coal train traffic in 135 car trains between the PRB

and the southeast United States. This line also handles doublestack intermodal traffic (Los Angeles, CA to southeast United States) that arguably is more difficult to handle than unit coal. To say that topography creates meaningful barriers to handling loaded PRB coal trains on the MNA ignores the reality that PRB coal trains regularly move under comparable, if not far more difficult, conditions on Class I railroads.

The topographical differences between the MNA line and UP's Oklahoma route should not distract from the undisputed fact that the route via MNA is much shorter than the UP route. For two routes whose ruling grades, curves, and other characteristics fall within acceptable ranges, the length of the route, or train miles operated, is by far the most important consideration in assessing the relative efficiency of routes for this type of heavy-haul operation.

Maintenance Needs and Traffic Levels

While it is generally true, as Mr. Hughes says (pp. 10-11 of his statement), that increased tons will cause increased maintenance, this does not mean that the MNA line is unusable or inefficient for unit coal train movements via the requested through route. Mr. Hughes has overstated the impact for both start up and continuing operations. Carriers expect to experience higher maintenance needs when they increase their traffic volume, because infrastructure wear and maintenance costs stem from the movement of traffic. Carriers don't object to higher maintenance costs to the extent that they reflect their handling of increased traffic volumes.

Furthermore, UP is operating with the same basic technology as MNA, so the traffic would impose maintenance needs whether it moved on UP or MNA – with this

one important difference: UP would be at a disadvantage, compared to MNA, because of the circuitry of its route. A longer route means more facilities to maintain.

The Cost Characteristics of MNA Augment, Rather than Offset, Its Mileage-Related Advantage

UP provides no evidence that the MNA route is more difficult to access, or that it costs more to repair when damaged, in comparison to the UP route. Similarly, UP provides no evidence that use of the MNA would entail increased maintenance cost relative to that of the current UP route. In fact, we believe MNA's cost structure may be lower than UP's for maintenance and infrastructure projects due to the following considerations:

- Lower train counts on MNA provide more on track time for maintenance activities (this lowers cost by increasing gang productivity)
- MNA has much more ability to contract with the most efficient producers of a wide variety of maintenance and construction projects
- MNA can achieve more focused and less bureaucratic management of projects due to its size and organization
- MNA has more flexible work rules
- MNA has lower overhead charges to project cost

Required MNA Infrastructure Work

In our verified statement in AECC's opening evidence, we explained that

[T]he MNA lines are suitable for use as part of a through route from the PRB to Independence. . . . Depending on the volume of new coal traffic and the desired level of service for existing rail customers as well as the coal customer at Independence, a capital bridge reconstruction program will be required, but we are aware of no reason for concern that this would make the route unfeasible. The MNA has upgrade programs underway to strengthen both track and bridges.

Heavin & Brookings VS at 4. We affirm that conclusion, and in light of some of UP's comments we want to stress the following points.

The level of required track structure expenditures on MNA for the through route is generally proportional to the level of traffic to be handled (as is basically the case for any rail line), and does not reflect inordinate "start-up" costs. MNA's flexible work rules and innovative operating philosophy may influence when, where, and how any new facilities are required, and decisions about these matters should be left to MNA and their customers. We expect that the parties involved – Entergy/AECC, BNSF, and MNA - will make rational economic decisions concerning investment, operating expenses, and benefits. UP (MP) handled the Independence movement on this line, and MNA is handling heavy wheel loads now and has the potential to handle more in the future.

Mr. Hughes, at p. 15 of his statement, says that in our opening statement we "appear to conclude" that MNA's lines are "fit to transport a significant number of loaded unit coal trains, substantially as is", and he claims that this conclusion is unsupported. Mr. Hughes does not define what he means by "significant number". We believe that the railroad can move 3 loaded trains per month "substantially as is", and that with modest additional work it can move 11 loaded trains per month. To move 33 loaded trains per month in the out years will require more work, to be determined by MNA when that time has arrived.

MNA engineering managers and their contractors are experienced in tie installation, surfacing, bridge work, rail renewal and construction. Even UP's Mr. Hughes praised MNA's "ability to control operating expenses and limit capital expenditures to the absolute minimum" Hughes Reply VS at 9. There is no

reason to believe MNA would not perform any required work at lower cost than experienced on UP or any other Class I railroad.

Mr. Hughes states (at 14): that at the time we inspected MNA, [REDACTED]

[REDACTED]

[REDACTED] During our inspection there were tie renewal and surfacing gangs working between Lamar and Independence. It was evident work had been done in the area to be traversed by the AECC/Entergy trains.

Mr. Hughes (at page 36) claims that we "failed to consider" various risks that he outlined. He asserts that "To accommodate significant loaded unit coal train operations over the proposed reroutes would require a total repurposing of the lines in question." We disagree. "Repurposing" of the MNA between Lamar and Independence to handle 3 loaded coal trains per month does not require substantial changes to the line, and if more trains are required, additional work commensurate with tonnage can be done.

Our point is that IF work is needed, it can be done within reasonable cost parameters to meet the needs of the service.

MNA Service Quality and Disruptions

Mr. Hughes claims (at 6) that the 96-mile segment of MNA the runs through the Buffalo River valley "has a history of regular flooding, sometimes shutting down railroad operations for days at a time". But Mr. Hughes ignores the fact that the UP route currently used is also susceptible to service disruptions due to flooding. The UP line from Paola, KS to Independence crosses a number of flood prone drainage areas including the Marais des Cygnes, Neosho, and Verdigris rivers in Kansas and Oklahoma. The Marais des Cygnes (the name means "Marsh of the Swans") in

particular has a long history of flooding and has interrupted UP service for long periods over the past years. The rivers mentioned above as well as many others on the more circuitous UP route have records of service disruption that are at least as problematic as the Buffalo River on MNA.

It should also be remembered that trains using the current route may become involved in congestion caused by outages at other locations on UP's large system. In particular, crew, locomotive, and yard congestion in and around UP's North Little Rock hump yard have been problematic in the past. MNA's route avoids these problems and this bottleneck and has ample potential for handling additional traffic in unit train configurations.

Mr. Hughes breathlessly reports (at 10) that if all of the coal delivered to Independence (6.5 million tons per year) were carried over the BNSF-MNA through route, this would "essentially triple traffic density on the MN&A lines south of" Lamar (or south of Aurora, if that were the interchange point). In the first place, this statement ignores the fact that most of the 6.5 million tons per year is contractually committed to UP until mid-2015; See Entergy's Opening Argument at p. 20. But even at the highest traffic level shown by Mr. Hughes, which assumes that MNA would carry the entire 6.5 million tons annually of Independence traffic, MNA would still be a low density line¹, with no more than 13.5 MGT on any part of the route to Independence, which is well within the capacity of MNA to handle (prior to mid-2015, the highest density would be only

¹ In our engineering careers, the following general criteria have been used to compare various volumes of rail tonnage:

<5 MGT	Light Density
5-20 MGT	Low Density
20-50 MGT	Medium Density
>50 MGT	Heavy Density

██████ MGT, and only about a quarter of that in most years). The percentage increase in traffic is high because today the line has very low traffic. What this means is that the line has unused capacity; adding traffic would improve asset utilization without producing the types of congestion that periodically plague the UP system.

In contrast, most, if not all, of the UP subdivisions from the PRB to Diaz Jct are heavy density. The UP route has many more potentials for bottlenecks and problems than does the MNA route.

MNA is Not a Typical Shortline Spin-off

Mr. Hughes discusses (at 8-9) factors leading to shortline spinoffs between 1980 and 1995, and while many of his statements are correct in a general sense, they do not apply to the particular circumstances of MNA. MNA was not a "physically frail" line (Hughes Reply VS at 8) when the lease-purchase agreement was made with UP. Instead of little or no traffic, jointed 85-95 pound rail, bad ties and no ballast, this property had a traffic base, 112 pound through 133 pound welded rail, bridges capable of 286,000-pound loading, along with good ties and ballast. Unlike the typical shortline described by Mr. Hughes, the MNA line had received infrastructure investment and maintenance befitting its use as a Class I route moving PRB coal trains.

Rail

Mr. Hughes discusses at length (at 16-20) the superiority of modern rail when compared to rail rolled in between 1940 and 1960. While we do not dispute this, the large capital investment required to change rail should not be made UNTIL the existing

rail is not serviceable. This occurs when service defects² or rail defects per mile exceed safety and economic thresholds. Mr. Hughes presents no evidence that those thresholds have been exceeded with the current 286,000-pound loadings. His supposition is that these criteria may be exceeded in the future. An industry rule of thumb used by many rail engineers is that 112# - 119# rail is uneconomical to maintain after the rail line exceeds 20 million gross tons annually. As Mr. Hughes himself calculates, even if the entire volume of Independence traffic were routed over MNA after mid-2015, the traffic would be less than 70% of the 20 MGT threshold.

Mr. Hughes also argues that "a fairly conservative approach to estimating rail replacement requirements is to assume an 80-year useful life for rail after installation on the MN&A." Hughes Reply VS at 19. A flat assumption of 80-year rail life is not a valid way to estimate rail replacement needs. Rail life is a function of tonnage, track geometry, maintenance practices, rail quality, and operating parameters. The rail should only be removed when it fails to meet reasonable, objective engineering and economic criteria. These criteria should be developed in response to a number of parameters: rail defects per mile, service-failed rails, rail wear on curves, ability to hold line and surface of the track, and tie life.

Practically, it is reasonable to assume that MNA will do what UP did prior to the lease/sale - replace old 112# - 119# rails as they become defective with larger premium strength rail. MNA will presumably also replace curve rail segments with 133 to 141 pound premium rail as curves near the practical wear limits. MNA will establish a plan

² Service defects are defined as broken rails that occur between internal rail testing cycles performed by ultrasonic, magnetic induction or other methods.

which includes replacement of rail in the years ahead based on projected tonnage. This is no different from what UP does on its own lines.

To replace the rail before it exceeds appropriate failure standards is a waste of capital. As information, we are familiar with lines that are successfully hauling far more Powder River Basin coal than is contemplated here, plus a mix of service sensitive intermodal traffic, at levels near 30 MGT per year with 112# - 119# rail.

Any concerns about MNA's rail is mitigated by the fact that UP, prior to the lease/sale, had relayed most of the curves 3 degrees or greater with 132 pound to 136 pound rail. Much of it was laid new and has very little accumulated tonnage. With proper maintenance, even at the projected tonnages in the most aggressive scenario, it will last far into the future.

Finally, UP operated the Montrose train on 112# - 119# rail of the same vintage as south of Lamar, MO prior to the lease/sale, and MNA has operated it successfully since that time, which is a practical refutation of Mr. Hughes' argument. MNA Roadmaster Kess Creech stated to us during our inspection of the line that the only significant defects found by the rail inspection vehicle in the 112# rail section are defective plant welds and defective field welds. This is similar to the experience of other railroads with the 112# rail section. This reflects more on the quality of the welds than on the quality of the rail steel. Also, accumulated gross tonnage has not yet reached a level to produce significant numbers of internal defects in the rail.

Claiming that it is not practical to operate unit coal trains on 112# - 119# rail is contrary to industry practice when tonnages are less than 20 MGT per year. The cost-benefit analysis of any rail relay is based on objective data such as rail defects per mile

and service defects – not conjecture about the “cleanliness” of the parent steel, as in Hughes Reply VS at 18. Mr. Hughes does not provide any type of persuasive evidence that the major sections of rail in track on MNA are near unserviceable levels based on industry accepted norms.

Ties

Mr. Hughes is similarly incorrect in his assessment of tie condition for future movements of unit coal trains over the MNA. He does not dispute that the 30% threshold we used in our opening statement is an industry standard, Heavin & Brookings VS at 10 (“Heavy axle loads from unit coal train movement will have measureable effect on cross tie condition in areas where 30% or more of the ties are defective.”) However, Mr. Hughes claims that this standard is not applicable to MNA because [REDACTED]

Hughes Reply VS at 21. As a result, Mr. Hughes says, MNA's ties are “older than average” and may only “appear to be ‘good’”. Id. at 22.

Mr. Hughes' speculation that MNA's good ties may actually be bad ties is totally unsupported. We have confidence that MNA's inspectors can determine whether ties are good or not with greater accuracy than Mr. Hughes can with his average age calculations. Furthermore, MNA personnel and contractors are capable of installing the needed ties at a cost per tie less than prices suffered by UP and other Class I railroads.

We agree with Mr. Crouch's statement on behalf of Entergy that the track in general is better than the minimum Track Safety Standards for defective ties set by the Federal Railroad Administration. There may be isolated tie clusters that are problematic, but this condition is not the norm on MNA. Defective ties will be replaced in the future

based on the volumes and conditions specific to the track impacted. MNA has done a professional job of maintaining their track at or above these minimums, and there is no reason to believe they will not do so in the future.

Ballast And Roadbed

Our inspection of MNA occurred in November 2009, and typical fall rains occurred prior to and during our inspection. This gave us an excellent opportunity to view the track ballast and roadbed under wet conditions. We disagree with Mr. Hughes' claim that the "route is generally fouled". Hughes Reply VS at 26. Mr. Hughes' suggestion that our inspection of the ballast was "casual" (at p. 26) is incorrect. We made a reasonable inspection to determine overall ballast condition, including looking at the ballast at the end of the ties and between ties and found it consistent with normal operations.

As on any railroad, fouled ballast will exist in some locations, it will be found during regular inspections, and it will be corrected as the need arises. It makes no sense to completely renew the ballast when this is not needed. As mentioned above, the Montrose train operates on this same ballast on the north section of MNA, and the current route to Independence uses the MNA line from Diaz Junction; MNA manages these sections successfully. This is the same ballast that is found between Lamar and Independence.

The purpose of ballast in the track structure is to drain the track, transmit the weight of the train from the rail and ties to the subgrade, keep the surface of the track in proper geometry, and provide lateral and longitudinal stability. If track ballast has failed, it is readily apparent during track inspection. We saw no large scale evidence of the

classic failure modes of the ballast section where the functions mentioned above were not being performed. There were:

- Few instances of failed subgrade due to inadequate ballast
- No unusual accumulations of water on the track
- A relatively low number of “mud spots”
- Good track geometry

MP and UP used good quality granite ballast when major rehabilitation work was performed between 1980 and 1990. This material has had low tonnages since installation and remains in fair to good condition. For projected volumes ranging from 7 to 13.5 MGT per year, the ballast renewals will be ordinary and within the scope of MNA normal activities.

As we noted in our opening statement (at 10), there was a small amount of limestone ballast introduced by MNA, “which will no longer be suitable with the introduction of heavier wheel loads.” We concluded that “No threats to the feasibility [of the through route] are rendered by the ballast or sub-grade “. Mr. Hughes, however, asserts (at 25) that all the limestone ballast should be replaced before starting through-route operation (and UP’s counsel asserts that we “point to” the need to replace limestone ballast as “another significant expense that M&NA would have to address before operations could commence” (UP Argument at 50 n. 44)). This is incorrect. There is no need to replace the small amount of limestone ballast before commencing operation of the through route. Our point in our opening statement was only that it would not be suitable to use such ballast in the future after the unit coal train operations commence; the existing limestone ballast will be replaced over time in the course of

maintaining the line. Mr. Hughes' suggestion that MNA should spend almost [REDACTED] to replace limestone ballast between Lamar and Independence is unreasonable. We cannot imagine MNA (or any other railroad) doing any such thing.

Mr. Hughes states without explanation that ballast replacement would be performed by a ballast screening machine. Hughes Reply VS at 25. In fact, because there are no long stretches of fouled ballast,³ it is more likely that, when ballast needs renewal in small sections, MNA will choose more cost-effective methods than Mr. Hughes assumes. Good on-track time availability plus the ability to contract with the most effective contractor will allow spot ballast replacement at lower-than-industry-average unit prices. But most importantly, wholesale replacement of ballast is not required prior to introduction of coal traffic, and any ballast work resulting from the coal tonnage can be accomplished in a routine fashion. The MNA would be handling low density traffic in the 7.3 MGT range (or less). What Mr. Hughes is proposing is utilized by the Class I railroads handling heavy density in the >50 MGT range.

Bridges

Relative Tonnages

The proposed startup tonnage of [REDACTED] tons per year up to [REDACTED] tons per year equate to only three (3) and up to eleven (11) loaded coal trains per month. This amount of traffic will not immediately change the existing conditions of the MNA bridges. Service to Independence could be started at these traffic volumes without additional major capital improvements to the bridges.

³ Mr. Hughes' assumption that 5 percent of MNA trackage requires remediation of fouled ballast is completely inconsistent with our field observations, and unsupported by any objective evidence.

Throughout his statement, Mr. Hughes uses the term "significant" to describe the volume or tonnage increases that the MNA would carry under the proposed through route. At the [REDACTED] ton level, Mr. Hughes' own calculations show that the maximum annual gross tonnage on any line segment of the MNA would be only [REDACTED] MGT. Hughes Reply VS at 10. Gross tonnage in the 5- 20 MGT range is considered low density.

For comparison purposes, the following UP subdivisions are on the existing coal route via Diaz Jct. The Marysville Subdivision is in Kansas between the PRB and Kansas City. The Parsons Subdivision is in Kansas south of Kansas City. :

<i>MNA - Lamar to Carthage</i> [REDACTED]	<i>[REDACTED] MGT</i>
<i>UPRR – Parsons Subdivision</i>	<i>50+ MGT</i>
<i>UPRR - Marysville Subdivision</i>	<i>100+MGT</i>

These numbers show that the magnitude of rail traffic on the UP high density lines is extremely high compared to the traffic that MNA would handle as part of the through route, and yet many of the steel bridge structures on all of these rail lines were designed and fabricated circa 1900-1910. The MNA will have many years of life left in its steel structures.

Existing Bridge Conditions

The MNA bridge system established by its predecessors MP and UP is similar to other railway systems in this geographic region of the United States; i.e., steel through truss spans and/or steel deck plate girders with concrete substructures over the major rivers, beam spans and/or concrete trestles over the medium sized streams, and treated timber trestles over the smaller streams and creeks. In the past, steel spans that did not have enough load carrying capacity for the heavier railcars were replaced by MP

with newly designed steel spans. Treated timber trestles were also upgraded to carry the heavier loads. This was accomplished by adding extra timber piling in the bents or adding stringers to the chords. Over the years, many timber trestles were replaced by MP or UP with steel or concrete bridges. The primary replacement criterion was, and still is, serviceability of the bridge. Age of the bridge is only one factor and not necessarily an important one.

The MP and UP bridge replacement programs were arguably the best and most aggressive in North America. MNA has been the beneficiary of these past bridge replacement programs. The steel bridge spans of a lighter design and the hard-to-maintain timber trestles have previously been replaced by MP/UP. In the future, MNA will have to monitor its timber trestle conditions for repair or replacement.

Based on its regular bridge inspections, MNA would be able to program bridge maintenance or replacement for those structures whose existing field conditions warranted it. These would be programmed over many years, depending on the individual bridge conditions. It is common for railroads to have bridge maintenance repair programs and bridge replacement programs planned 10-15 years in advance. Annually, following regular bridge inspections, these programs are reviewed and priorities are re-established based on the actual field conditions of each bridge and the expected amount of rail traffic.

Today, the MNA has a total of 174 bridges in the 281 miles between Lamar, MO. and Independence, AR. The total length of these bridges is approximately 5.0 miles. Timber trestles are 56% of this total by number and 39% by length. Steel and concrete bridges comprise the other portion of the bridge system. MNA's bridge contractor,

Osmose Railroad Services, Inc., inspects and repairs timber trestles all over the United States and Canada. They know and understand timber trestles extremely well. We observed their work at several bridge locations during the hi-rail inspection trip in November, 2009. MNA officials stated that their bridge system is 286,000 pound compliant and, indeed, we did see these size cars throughout the system.

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Mr. Hughes states (Reply VS at 12) that in [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Two (2) of these nine bridges were being worked on by Osmose Railroad Services, Inc. during our inspection trip in November 2009, and the slow orders would be removed soon. A third bridge was within yard limits at Carthage, MO; it is assumed that this slow order was not affecting rail operations and work would be scheduled at the appropriate time. Of the remaining bridges, three (3) required new bridge ties, two (2) required timber stringers, and one (1) required timber cap replacements. These conditions are not major structural defects, but were serious enough in the opinion of the inspector to justify a slow order. It is not uncommon for railroads to have slow orders on bridges. These slow orders will be removed as work is performed.

The ballast retainers, [REDACTED]

[REDACTED] are not critical structural items on a ballast deck timber trestle. They are easily seen from a hi-rail inspection vehicle even when it does not stop at that particular bridge location. The function of the ballast retainer is to hold in the ballast that is on top of the deck planks. This retains the ballast around the ends of the track ties

and assists in track alignment. An experienced track inspector would determine if a particular bridge with missing or broken ballast retainers was in a condition requiring attention or should be placed in the normal bridge maintenance schedule. It is the easiest member on a ballast deck timber trestle to replace.

Mr. Hughes extrapolates, from the repair and replacement costs for the bridges between Diaz Jct. and Independence, that total repair and replacement costs for the bridges between Lamar and Independence would be [REDACTED]. Hughes Reply VS at 33. Repair or replacement for any particular bridge is based on its field conditions and serviceability. Most of the bridges that Mr. Hughes refers to between Diaz Jct. and Independence are timber trestles. This area is mainly overflow for the Black River, and these bridges therefore span over low areas that are usually wet, and poorly drained. Because of these conditions, wood decay is extremely high in this area and contributes to groundline and/or waterline deterioration of the piling and wood decay in the timber stringers, especially the ballast deck timber trestles. The bridges north of Independence are in rocky soil that drains well. In our opinion, the cost extrapolation performed by Mr. Hughes is invalid.

Mr. Hughes claims (Hughes Reply VS at 30) that "one can safely assume that the need for bridge repairs would pose a significant obstacle to moving coal in the volumes contemplated by Entergy and AECC". He blames this on what he calls MNA's "one stick at a time" approach to bridge maintenance, which he describes as "focus[ing] on critical component replacements", "limited to the minimum required annually to replace individual bridge members". Id. at 31. Yet this "one stick at a time" approach has been used on its bridges between Diaz Jct. and Independence where annually 6.5

million tons of coal have moved since 1989. We disagree with Mr. Hughes' "safe assumption". The condition of MNA's bridges is not an obstacle to establishing a BNSF/MNA through route moving between [REDACTED] tons of PRB coal annually to Independence.

Capital Bridge Program

In our opening statement we concluded that:

Depending on the volume of new coal traffic and the desired level of service for existing rail customers as well as the coal customer at Independence, a capital bridge reconstruction program will be required, but we are aware of no reason for concern that this would make the route unfeasible.

Heavin & Brookings VS at 4. Mr. Hughes claims (Reply VS at 29) to find this statement inconsistent with our statement that "[t]he MNA today is 286,000 pound compliant and does handle rail cars of this weight over its system." Heavin & Brookings VS at 11. There is no inconsistency. It is a fact that MNA is today 286,000-pound compliant and does handle 286,000 pound cars. However, if the proposed through route is established, then for reasons of economy, MNA would undertake a capital bridge program as warranted to replace those structures that would require more maintenance at higher volume levels. The extent of that program, and the volume of traffic at which MNA would begin to implement it, will be determined by MNA.

There's nothing unusual about this. The move by UP and other Class I railroads toward placing more rail traffic on their high density lines will require earlier replacements of steel bridge spans on their systems. These steel spans will not be replaced because they cannot handle the car weights, but because of steel fatigue caused by the increased cyclical loadings. MNA will not need to consider such a program for its steel bridges, even if all the coal to Independence uses the new through

route, because the number of cyclical loadings on its steel bridge structures will still be low.

Regarding the timber trestles, Kansas City Southern Railway (KCS) is predominantly a timber trestle railway operating in the same geographic region of the United States as MNA. FRA Class 3 line segments (same as MNA) of the KCS are today handling up to 40 MGT over timber trestles at speeds of 40 MPH. The majority of this tonnage is handled in unit trains of coal (up to 135 cars) and grain (up to 110 cars). The field condition of any particular bridge and its serviceability are the major factors in determining whether it is repaired or replaced. Rail traffic in the range of 7-14 MGT can be handled easily on MNA line segments today.

A future MNA capital bridge program may concentrate on repair or replacement of timber trestles. This will be determined by field conditions of the individual bridges. However, the existing MNA bridge conditions are not an obstacle to establishing or operating a BNSF/MNA through route to Independence.

Tunnels

The six (6) tunnels on the MNA, totaling 2.42 track miles, have been in service since this line was constructed around the turn of the 20th Century. Other than the addition of concrete portals and some concrete sidewall construction, no major work has been required at any of the tunnels. They have not been a maintenance problem for MNA. The possible introduction of 286,000 pound coal cars through the tunnels does not pose a maintenance issue. We do not believe that 286,000 pound cars moving on welded rail at 30 MPH or less places any additional stress on the tunnels. In fact, we believe more stress was placed on these tunnels in the steam engine era from 1900

until the early 1950s. The combination of the smokestack exhaust, reciprocating steam engine driver wheels with associated impacts, and smaller jointed rail would impart far more stress and vibration into the tunnels than today's state-of-the-art locomotives and coal cars running on heavier, smoother welded rail.

The early heavy steam engines had significant effects on the design of railway facilities. On bridges, designers did not fully understand the additional loading, vibration, and nosing effect of the steam engine slapping back and forth against the rails as its reciprocating drivers drove the engine forward. In many cases, the designers accounted for this additional loading by assigning an impact factor of 100% to the live load created by the engine's weight. In effect, this doubled the weight of the engine for design purposes. Because of the total weight of a heavy steam engine (which in many cases was 400,000 plus pounds or about equal to the weight of today's locomotives), bridges and other facilities were designed largely to carry the (live plus impact) loadings of the steam engine. The rest of the train was light in comparison. Today, with improved measuring techniques and smoother running diesel electric locomotives, designers would assign, on a similar structure, impact factors in the range of 35-60%. Bridges are now designed primarily for the axle loadings of the cars in the trains, as they now govern the design over the weight of the locomotives. However, older bridges frequently can handle such loadings because of the provision in their original designs for the impact loadings of steam engines.

On tunnels, designers often put "blast plates" to protect the top of the tunnel from the smokestack exhaust. Also the impact loadings discussed previously caused deterioration to the walls and ceilings of the tunnels. Jointed rail was an additional

source of impact. Obviously as it applies to tunnels, the type and continuity of the geologic formation plays a large role in its maintenance. We believe the tunnels on the MNA have already experienced their major loadings and only minor maintenance will be required going forward.

Mr. Hughes claims that [REDACTED]

[REDACTED] (Hughes Reply VS at 35), but he provides no basis for this assertion. We do not believe that these costly measures are required for the proposed through route. During our inspection, the tunnel ditches and the approach ditches were flowing freely. We do not anticipate this will be a major maintenance cost, and certainly not one that has any unique nexus to the coal movements at issue. When and if ditching is required, the modern slot trains now in use in the railway industry make the tasks of ditch cleaning and debris disposal very efficient.

Vegetation Control and Drainage Ditch Restoration

Mr. Hughes claims that 200 miles of the proposed through route "are overgrown with brush and weeds", and that "there is standing water near the track in many locations". Hughes Reply VS at 35. These descriptions are inconsistent with the condition of the line as we observed it on our November 2009 inspection.

We are familiar with maintaining vegetation and free flowing ditches in this geographic region of the United States. Both of these items are important to a stable track structure. During our inspection trip, the vegetation was dormant, but MNA Roadmaster Kess Creech told us that MNA employs a contractor to spray the vegetation over the entire railroad. Also, another contractor is used to cut

approximately 100 track miles of brush each year. The general appearance of the railroad was open and free of encroaching limbs or brush.

Ditching generally is performed on an as needed basis, when track ditches do not carry water away from the track and ponding occurs. These problem areas would normally become mud spots in the center of the track as the water migrates from the track ditch to the subgrade under the track. We saw a relatively low number of mud spots during our inspection. Today's modern slot trains and ditching equipment can improve poorly draining areas quickly.

Capacity Constraints

To perform an acceptable interchange of empty and loaded coal trains at Lamar or Aurora new interchange tracks must be constructed and we expressed this need in the original submission. UP's experts agree that interchange connections need to be constructed, and that the physical topography and layout permit the new connections. (UP Argument at 50 n 42, 51 to 55; Wheeler & Plum Reply VS at 4 n. 2, 5 to 9; Hughes Reply VS. at 36 to 38) but they exaggerate the complexity and cost of the tracks required.

The objectives to achieve are:

- interchange connections must provide the ability to move the trains from one carrier to another efficiently, minimizing delay to main track operations; and
- interchange track should provide the ability to stage trains in the clear of both railroads for crew changes and train meets,"

These functions can be accomplished economically despite the objections raised by UP (Wheeler & Plum at 5, 9; UP Argument at 50 n 42, 51 to 55.). AECC witness Nelson describes ways to do this in his rebuttal verified statement.

One objection raised by UP involves the possible blocking of 21st Street south of the MNA/BNSF rail crossing in Lamar. When practical it is good to eliminate road crossings in interchange tracks, but it is not always possible, and there are many instances where street crossings intersect and cross existing interchange tracks. This is not a major street crossing, and for volumes of 3 to 11 trains per month less expensive solutions are available than UP's proposal to require MNA to construct more than three quarters of a mile of track.

The problem would arise if two conditions exist at once: No crew is available at the time the train arrives at the interchange, and the MNA must clear their mainline. While these conditions may occur from time to time, it is not reasonable to assume that both conditions will exist on every train. Crew changes could be made at 30th street in some instances. If these conditions do arise occasionally, the 21st street crossing can be cut⁴. Our point is that cost-effective solutions are possible (terrain, railroad crossing angle, drainage, soil conditions, building locations, etc. are favorable) and MNA and BNSF will work out a facility and operating plan that works based on volumes in the contracts. MNA crews are more flexible and they accomplish crew changes and meets more efficiently than UP/BNSF crews.

The 61 mile segment between Bergman and Crane will not need an additional siding in our opinion for 3 more trains per month, and may not need one for 11 trains

⁴ Cutting the crossing involves separating the train in 2 parts allowing cars to cross the track while waiting for crew, track time etc.

per month if MNA is able to move the empty trains off this stretch of track quickly. MNA may decide to extend an existing siding or use existing sidings by cutting the empties at Gretna. If MNA decides to establish a siding that can chamber a 135 car train in this area, we believe that a detailed engineering review will reveal both Crane and Gretna can be extended as the need arises and that replacing the siding at Davis⁵ for shorter trains is practical and possible. Wheeler & Plum Reply VS at 16 and UP Argument at 55 assert that building a siding on this territory will be expensive because of the terrain. Grading has been completed on the retired sidings where it might be prudent to replace them, and the extending the existing sidings by 400 to 600 feet would not be extraordinary.

Wheeler & Plum Reply VS at 17 discusses setting handbrakes at Davis on the 0.95% grade and the length of time needed to release those brakes when it is time to leave. Unless the train is stored at this location without a crew, setting handbrakes is not necessary. We believe the MNA would not use this siding to store trains without a crew except in an emergency, and this would not be an issue in normal operations, particularly since the Cotter yard is less than 35 miles from Bergman.

Wheeler and Plum state (at 9-14) that additional staging capacity would need to be established to supply the plant with unit trains. For 5 years – until mid-2015 – UP will still handle most of trains to Independence. We assume the tracks in Newport, AR yard will still be available for UP's share of the business. If the through route is handling 3 trains to Independence per month, we do not believe additional storage will be needed. If the through route handles 11 trains per month, the siding at Cushman, AR could be

⁵ Missouri Pacific Timetable NO. 22 dated May 27, 1984 indicates Davis, Ark siding was 7025' long not 6851'. (Wheeler and Plum at 17)

used if needed for short term staging. Newport is closer to the plant than Cushman but the 2.2 miles from Newport to Diaz Jct. faces the interference suffered by trains on the busy UP-Amtrak mainline between Little Rock and Poplar Bluff. If additional staging tracks are needed the parties may choose to rehabilitate and/or extend tracks at the yard at Cotter. Again, BNSF, MNA, Entergy/AECC can make that decision if and when it is needed.

Staging tracks at Lamar would also be based in the same manner – 3 trains per month should not require additional trackage beyond a connection, 11 trains per month MAY require staging tracks, but the parties should decide when and how.

After mid-2015, if the through route were handling all the Independence traffic, additional staging tracks would be required, but the space and the terrain are available and economics will dictate how this is done. As Wheeler and Plum indicate (at 12), grading has been performed for staging track at Independence and another is possible. There are a number of options available for addressing the staging requirements.

Summary Of Conclusions

In general, UP's experts paint a picture of a railroad that is on the brink of breaking down and has little capacity to accept new traffic so that introduction of even the modest amount of additional tonnage that the through route would bring in the early years (500,000 tons in most years, and not more than 1,950,000 tons until 2016) will cause serious damage to the track and structures and render day to day operations a Herculean task.

We, on the other hand, see a railroad that was in good condition when leased/sold to MNA and which has had responsible maintenance performed since they

began their operation. It compares favorably with other lines with similar tonnages. MNA has demonstrated understanding of the railroad, and has solid personnel on staff and access to competent outside technical resources who can meet the challenge of increased volumes without the up-front investment requirements postulated by UP's witnesses.

VERIFICATION

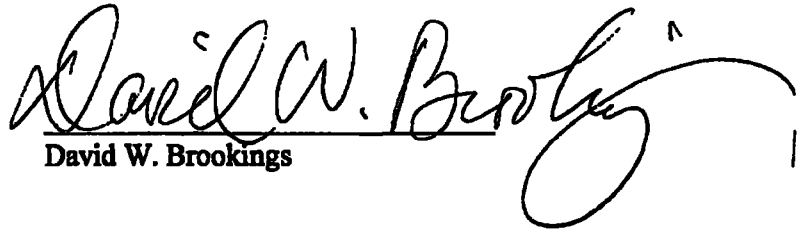
I, Jerry W. Heavin, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.


Jerry W. Heavin

Executed on 7-7, 2010

VERIFICATION

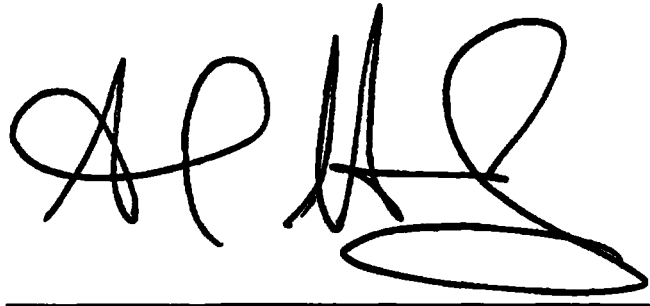
I, David W. Brookings, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.


David W. Brookings

Executed on July 6, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have caused the foregoing documents to be served electronically, on this 9th day of July 2010, on all persons on the Board's service list in Docket 42104.

A handwritten signature in black ink, consisting of stylized, overlapping loops and strokes, positioned above a horizontal line.

Alex Menendez